

ANTHRACITE

SCOTT NEARING



H. B. Jan. 29, 1916

DEDICATED

To an order of life in which the chief aim
will be happy and noble human beings.

ANTHRACITE

An Instance of Natural
Resource Monopoly

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"Wages in the United States," "Financing the
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Chapter 5. The Profits of the Operators

Meanwhile the owners of the anthracite region have been making profits that are generous in the extreme. Measured in terms of earnings, of dividends, or of surpluses, the anthracite interests are reaping the full benefits of their monopoly control. The prosperity of the anthracite owners has been particularly noticeable since the formation of the effective combination of 1898.

Chapter 6. A Concrete Example—The Conflict of 1912

The anthracite situation is well illustrated by the events surrounding the strike of 1912. The workers gained a net increase of about five per cent in wages; this raised the labor costs of the coal slightly, and the operators promptly added twenty-five cents to the price of each ton. The increase in wages was used as a pretext to saddle additional

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PREFACE

DURING these years of spectacular military conflict, it is easy to forget the increasing economic turmoil that is interwoven with present-day existence. Economic issues arise on every hand. Capital and labor, wages, the cost of living, unemployment—these things are a source of endless social disruption.

Economic issues may be considered in the large. They possess equal potency in individual cases, just as the drop of water contains the qualities of the ocean. Furthermore, the individual instance is more easily studied, its characteristics are more readily comprehended, and the proper method of treatment more safely prescribed. Moreover, it is highly probable that the deductions which may be drawn from the economic conditions surrounding one specific problem are in large measure applicable to the similar problems elsewhere.

Some satisfactory method of studying economic problems must be devised. Dogma will not stand the test of experiment. Preconceptions and tradition fall by the wayside. Meanwhile the world must know!

Knowledge is the only weapon that will ever overcome the host of difficulties arising out of the stress of modern life. Knowledge must therefore be the keynote of social endeavor.

Knowledge must be spread through the land. At one time it will be propagated by means of a broad hypothesis like that of Darwin or Marx. At another, many persons, working each in his own field, will produce atoms of information, which, aggregated, will constitute the basis for still further advance.

This little book is not a general study. It does not aim to set forth any new hypotheses. It aims to explain some of the more important phases of modern economic life as they apply to one industry, localized in one corner of one state. It is written with the hope that the propositions that hold true for the anthracite industry may be found to hold, with equal truth, for other natural resource monopolies.

A BRIEF SUMMARY OF THE ARGUMENT

Chapter 1. Monopoly on Trial

MONOPOLY is on trial in the United States. The early colonists established a system of property ownership under which the natural resources—fertile land, timber, minerals, water power, and all of the gifts of nature except harbors and navigable waterways—might be owned by private individuals. Under the system of private ownership of natural resources most of the valuable parts of the earth's surface have passed into the hands of a comparatively small number of people. The owners, by virtue of their ownership of these particularly desirable parts of the earth's surface, are enabled to collect returns for the use of their properties.

The system of private ownership of natural resources may succeed or it may fail. Its fate depends, in the long run, on the effect which it has on the well-being of the masses of mankind. Three centuries of property relations, under which any man who could buy it might place a "no trespassing" sign upon as much of the earth as he could afford to buy, has made a few people the owners of the earth.

Chapter 2. The Anthracite Problem

The anthracite coal fields present an excellent illustration of the ultimate effects of the private

ownership of natural resources. The anthracite product has a broad, general market; the anthracite field is limited in extent and localized in one small area, the ownership of the field has been concentrated in a very few hands. Millions of consumers depend upon anthracite for fuel; hundreds of thousands of families depend upon the industry for a livelihood. The way in which the consumers and the workers fare at the hands of this private resource monopoly may give many a valuable hint regarding the way in which consumers and workers may expect to fare at the hands of other natural resource monopolies.

Chapter 3. The Consumer and Anthracite Prices

The consumer is called upon to pay a price for coal which represents, not the cost of producing the coal, but a monopoly price based on the principle of "all that the traffic will bear." The monopolist, in other words, charges all that he can for his product, his aim being, not low prices but high profits. When the cost of producing anthracite increases, the consumer is promptly saddled with an additional burden. The facts show clearly that the consumer of anthracite pays all of the costs of production plus a handsome monopoly profit to the owners of the resource.

Chapter 4. The Wages of the Anthracite Workers

The anthracite workers fare no better than the workers in any other large American industry giving employment to men of a similar grade of

skill and intelligence. Indeed, when the risks involved in mining are taken into account, the anthracite miner is often worse paid than employees doing similar work in other industries. Many of the workers in the anthracite field receive a wage which will not buy a decent living for a family of ordinary size. Furthermore, the wage of the miners in recent years has failed to rise as rapidly as the cost of living. Consequently the income will not go as far now as it did in 1903. Certainly the miners are receiving no share of the heavy monopoly toll taken from the consumer.

Chapter 5. The Profits of the Operators

Meanwhile the owners of the anthracite region have been making profits that are generous in the extreme. Measured in terms of earnings, of dividends, or of surpluses, the anthracite interests are reaping the full benefits of their monopoly control. The prosperity of the anthracite owners has been particularly noticeable since the formation of the effective combination of 1898.

Chapter 6. A Concrete Example—The Conflict of 1912

The anthracite situation is well illustrated by the events surrounding the strike of 1912. The workers gained a net increase of about five per cent in wages; this raised the labor costs of the coal slightly, and the operators promptly added twenty-five cents to the price of each ton. The increase in wages was used as a pretext to saddle additional

burdens on the consumers. The operators made millions by the transaction. This situation brought out clearly the rule that seems to hold true of this natural resource monopoly—the workers' gains are slight, the operators' gains are immense and the consumers foot the bill.

Chapter 7. An Object Lesson in Monopoly

The extra burdens on the consumer, the indifferent position of the worker and the huge returns to those who control the monopoly, seem to represent with some degree of accuracy the situation that the American people will face with all of the natural resource monopolies. The manifold effects of the anthracite monopoly power upon the consumers, the workers, and the economic, social and political organizations of the community are due, not to the fact that the monopolists control anthracite, but to the fact that they have a monopoly. Wherever it appears, monopoly leads to certain well-defined ends that are evidently in conflict with the best interests of society.

Chapter 8. The Future of Anthracite

The consumers, the workers and the owners have an interest in the anthracite fields. So long as the private monopoly of natural resources is permitted, the consumers will be called upon to foot the bill. Under the present system of natural resource ownership they get their fuel at an unnecessarily high figure. The worker need

expect no better treatment from a monopolized industry than he expects from a highly competitive industry. Indeed, where a monopoly is powerful enough to control the political machinery as well as the industrial machinery, the worker may fare worse under a monopolized than he would fare under a competitive industry. The real gainers under the present system of private monopoly of natural resources are the monopolists themselves. They have nothing to lose and a very great deal to win from the continuance of the present system of resource ownership. Of the three parties at interest, the monopolists and they alone will be benefited economically by a continuance of the present system in the anthracite coal fields.

CHAPTER 1

MONOPOLY ON TRIAL

1. *The Nature of Monopoly*

THE owners of the anthracite coal fields are monopolists in two senses: First, they are monopolists because they own the coal-bearing land. Second, they are monopolists because they have concentrated the ownership of the important anthracite deposits in a comparatively few hands.

Economists have agreed to define monopoly as a control sufficiently great to fix a price above the competitive level. Thus, for example, if five men are spinning cotton yarn and selling their product in the same market, each one of the men will naturally try to out-do the other, either by furnishing a superior quality or by selling at a lower price. The price of the yarn under this free competition will be lowered to a point at which the spinner who is producing at the greatest cost is getting a return for—

1. The cost of running the business, including raw materials, tools, housing and the like.
2. Wages for himself as a worker.
3. A fair profit on his investment and for the risk which he incurs in carrying on the business.

A price including these items is called a "cost price" because it represents the actual costs of production, including a fair profit.

Free competition makes cost prices. The existence of cost prices is proof of the freedom of competition.

One of the five yarn spinners, who is producing more cheaply than his fellows, may decide to lower prices. He has certain efficiency devices that enable him to do this and at the same time to secure a reasonable profit on his business. Prices go down, and the four competitors who are spinning yarn under greater costs can no longer earn profits. If the situation continues, the competitors will be forced out of business, since prices cannot exist permanently below a figure representing the cost of production.

The five spinners, instead of yielding to the pressure of competition, decide to combine in the interest of larger profits. One of them is a clever business man, who persuades his fellow producers to join with him and advance the price of yarn 20 per cent. The yarn makers now are receiving a return for—

1. The cost of running the business.
2. Wages or returns for management.
3. Profits on the investment.
4. Monopoly power.

This fourth element is the result of the agreement whereby the producers of yarn advance the price above the cost basis.

Monopoly power is the power to establish prices above a cost or competitive basis. Any advantage that enables a person to do this is a monopoly advantage or, as it has recently been called, a special privilege.

Conceived in these terms, the mere ownership of a natural resource, limited in amount and subject to a demand greater than the supply, is tantamount to monopoly, because, since there is not enough of the resource to go around, those who do hold it are able to charge an extra or monopoly price for it.

Land ownership is perhaps the greatest single monopoly with which society must deal. There is no sense of the word in which the private ownership of land is not monopolistic.

Were there enough land for everyone, and some to spare, land ownership would be in no sense a monopoly. Other natural gifts like air and sunshine exist in such quantities that all people have an ample supply of them. Could air or sunlight be privately owned and limited in amount, they would afford a monopoly power as great as that of land. The owners would be able to collect huge profits from those who wished to enjoy air and sunshine. The monopoly of air and sunshine has proved impossible hitherto. No one has yet devised a scheme for fencing them in and putting a price on them.

Land can be fenced in. Unlike air and sunshine, there is no difficulty in fixing the boundaries of land ownership.

Every community in the world, except a newly settled wilderness like central Canada today, faces the land problem. In every community there are more people who want a piece of land than there are pieces of land to go around. Hence, the mere title to a piece of land enables the owner to put a price on it. He may own a sand bar near a growing summer resort, or a farm in a section which has been tapped by a railroad line. He need never have seen the land, much less improved it. His ownership gives him monopoly power.

There is no cost attached to a piece of unimproved land. The owner has done no work upon it. He has taken it just as nature gave it. Nevertheless, after he becomes the owner, if he finds that the land contains some mineral or is in some other way desirable, he may secure a very high price for the land, because he is the owner.

The monopoly power of land ownership may be seen in a growing city. Near the commercial center lies a vacant lot. Each year the owner of that lot learns, from the assessor's books and from the sales of neighboring properties, that his land has increased \$100 in value. His taxes and the interest on his investment are but \$50 a year, so that the rise in value gives him a clear \$50 monopoly profit. One day a storekeeper offers to rent this lot for twenty years and put a store on it. The owner consents, and for the granting of that privilege, he receives \$1,000 a year. From this

\$1,000 he deducts interest and taxes. The remainder is monopoly profits.

2. Anthracite Ownership Means Monopoly

All returns which come from land, because of its location or because of its natural fertility in soil, minerals or other resources, are monopoly returns. Much of the return on anthracite coal falls in this class.

The supply of anthracite coal in the United States is very limited. The demand for it is widespread. The owner of anthracite coal land can set a price that will represent the difference between competitive conditions and the consolidated ownership of the anthracite coal field.

So absolute is the monopoly power that is inherent in the ownership of a natural resource, limited in supply, that the owner of a piece of anthracite coal land may receive, for his bare ownership, a price in proportion to the amount of coal that his land contains. This is true without any reference to the conditions under which the land was obtained.

Thus, for example, a man has gone into the mountains and bought a tract of cleared land. The timber has been cut off; the hills are rugged and precipitous; the valleys narrow and unfertile. Some day the land will be reforested. Meanwhile it lies fallow, a prey to the periodic forest fires that sweep off the undergrowth and prevent the development of a good growth of timber. This land sells for 20 cents an acre.

The owner feels that he has a bargain—\$1,000 for 5,000 acres of land. He builds a hunting lodge, posts "No trespassing" signs, and spends a few days winter and summer hunting and fishing. To him the land would have been cheap at twice the price.

A geologist, in making a survey of the region, discovers anthracite on the tract. There are two veins—one thick and fine; the other thin and poor. They are both workable, however.

The nearest railroad is four miles from the 5,000 acre tract. The land has not changed in its make-up for a million years, and yet, no sooner is the discovery of this coal made known than the owner of the hunting lodge is asking \$100 an acre for land that was cheap at 20 cents only yesterday.

What is the explanation? Under this land there lies a vein of coal. People want it. They are willing to pay well for it, and the land owner, because he is the owner, is able to sell for \$500,000 a tract that cost him \$1,000. The difference in value represents the monopoly power that attaches to the ownership of a resource, limited in amount and generally desired by the community.

The owner of the 5,000 acre tract may decide not to sell his land. Instead, he may make a stipulation that for each ton of coal dug from the mine he is to receive 10 cents. From that time on, and as long as the property is producing coal, this owner of 20-cent hunting lands will be receiving an income greater or less in proportion to the amount of coal mined, so long as the property is

productive. This royalty privilege is another phase of the monopoly power of ownership.

The owner, for no reason other than his ownership, is able to share in the products of the land to which he holds title.

The point is emphasized because of its profound significance. In all economic discussions the place of ownership must be clearly understood. Wherever there are two pieces of land wanted by three men, the owner of each piece of land will be able to put a price on his piece.

Anthracite coal land falls in this monopoly class. There are only a few acres of such land. These few acres are wanted by a large number of people. The excess of demand over supply enables the owners of the anthracite coal land to set a price on it and receive a monopoly return for their ownership.

3. Monopoly through Concentration of Ownership

Anthracite land owners have monopoly power because they own the anthracite land. They have clinched this monopoly power by concentrating the ownership of the many acres of anthracite land in the hands of a very few people.¹

The continent is so arranged geologically that for every acre of anthracite land there are 4,000,-000 acres of land that do not contain anthracite. This geologic fact places great monopoly power in the hands of every anthracite owner. Add to this the successful business ventures that

¹ A statement of the extent of this monopoly will be found in Chapter 2.

have culminated in the concentration of the anthracite acres under the control of a very small group of interests, and the monopoly picture is complete.

The fact that there is only one acre of anthracite land for each 4,000,000 acres of other land means that the chances for competition are comparatively small. Concentrate the ownership of all the anthracite acres in a few hands, and the possibility of competition vanishes.

4. Competition, the Life of Trade

At this point the reader will infer very readily that the complete monopoly of a natural resource is bad. But is it?

The people of the United States are very eager to conclude that a thing is either "good" or "bad." In the case of monopoly, they have been even more than anxious to attach words of opprobrium and reproach to any business organization which displayed monopoly characteristics. A long line of anti-trust statutes which have been passed during thirty years furnish abundant evidence of the popular conviction that the trust was "bad" and "wrong." Farmers and small business men united their influences, and state and national legislatures alike loaded the statute books with laws directed against certain forms of monopoly power.

The trust was fought from all angles. Rival businesses were organized. There was, on the one hand, the trust; on the other hand, the anti-trust

organization, which in its turn became virtually a trust. Yet, strangely enough, a certain amount of public approval attached to the anti-trust trust because it was in a position of opposition to the original trust. Both might be, and probably were, charging similar prices. Both organizations might be reaping huge returns through their ownership of natural resources, patents or other special privileges. Yet the mere fact that the first organization represented the trust, while the second organization opposed it, gave some color to the demand of the second organization for public confidence and patronage.

The opposition to the trust was founded on the axiom that competition is the life of trade. The phrase is an old one. In the eighteenth century it was revived and given widespread currency by the Physiocrats and their followers.

The axiom that "competition is the life of trade" was accepted as the great and universal law of the economic world. Economists promulgated it and business men did their best to live up to it. For generations competition was venerated with a childlike confidence by the commercial intelligence of the Western World.

Finally a change came. Experience is an effective teacher. Men learned by degrees that competition did not pay. Producers waged cut-throat wars with one another, until experience taught them two things: First, competition may ruin the successful as well as the unsuccessful competitor. Second, whoever won, the consumer, and not the

producer, derived the benefits under the competitive regime.

Experience finally convinced the business world that competition was dangerous in the extreme—almost as dangerous to the successful as to the unsuccessful competitor. Many a successful man, at the end of a price war, has gazed around him at the havoc wrought by the struggle, has estimated the cost in health and effort, and has then wondered whether, after all, it really paid. Certainly it did not pay, in business returns, even for him. It had ruined the man who lost.

The consumer liked competition because it did pay. A price war meant cheap goods. Competition spelled plenty for the housewife. Therefore the consuming public was an ardent supporter of the competitive regime.

5. The Growth of Co-operation and Combination

The manifold experiences of business triumphs and failures combined with a number of other factors to convince the producer that while competition might be the life of low prices, it was the death of profits. He sat down with a fellow manufacturer at a quiet luncheon and whispered this idea to him across the table. The other nodded intelligently. He, too, had reached the same conclusion, though he had never dared to breathe a word concerning it. The little luncheon gave place to a larger one, out of which grew a manufacturers' association, a gentlemen's agreement, a trust or a combination. The idea spread

like wildfire and producers began to take care of themselves through the sure channels of trade co-operation and organization.

The different forms of co-operation were variously effective. The association with its dinners and conventions gave men in the same line of business a chance to form speaking acquaintances with each other. The gentlemen's agreement bound producers loosely together. They agreed to fix prices; to sell only certain lines of goods; to sell only within a certain territory or only under certain conditions. The gentlemen's agreement was unenforceable at law, but the erstwhile competitors had seen a great light. They realized the superiority of co-operation over competition and kept well in line.

The trust and the combination were formal and legal. Great funds of capital were aggregated under the direction of one group of men. Entire industries were brought under the control of one corporation. Even though there was no monopoly in theory, there was no longer active competition in practice. Thus, through a series of "get-together" devices, the era of competition gave place to the era of co-operation and combination.

With the cessation of competition, the consumers came face to face with the pressing necessity of taking care of themselves. Prices were no longer fixed on a competitive basis. Some prices rose mightily. Others failed to decrease in proportion to the greater efficiency of produc-

tion. The consumers had depended for price regulation on a competitive war between producers, and the producers had declared a more or less permanent peace.

The transition from competition to combination led to a new definition of monopoly profits. They could be estimated no longer on the basis of a competitive price level, because there was no competitive price level. Some substitute for the competitive price level was necessary. The one most easy to apply was the "cost of production." Therefore, at the present time a monopoly profit is defined as a profit in excess of a fair return on the actual costs of conducting the business.

The difference between a competitive price level and a cost price level is theoretically very small. Competitors were supposed, by their competition, to reduce prices to a point where they yielded only a fair or reasonable profit. Those who advocate the fixing of prices on the basis of cost insist that the theory behind competition be made the basis for regulation. Whenever a price is maintained at a point that yields more than a fair return in the actual cost of conducting a business, then a monopoly profit exists. This definition does not allow a business to first capitalize its earnings and then allege the charges on this capitalization as one of the costs of its business. Cost prices are figured on the physical valuation or cost of replacement of the physical property of the business.

Whatever their form, industries which exact

more than a fair profit on the cost of production are in possession of monopoly advantage. Wherever monopoly power is being exercised there is an opportunity for a reduction of the cost of living through a reduction of monopoly prices to a cost level.

6. *Will Monopoly Work?*

Whatever may be the theory regarding the desirability of competition and the menace of monopoly, the fact is that the business world is being rapidly transformed from a competitive to a co-operative basis. Though this co-operation does not always involve monopoly, it does involve a considerable decrease in the amount of free competition.

Furthermore, in a scientific age men are not content to accept any dogmatic formula without inquiring into its validity. Our forefathers said, "Competition is the life of trade." Their descendants added, "Monopoly is a public menace." The students of the present generation, surveying the competitive regime of the early nineteenth century and the monopolistic regime of the late nineteenth century, may well ask a different kind of a question. Monopoly is not a matter of figures, but of economics. It is neither good nor bad. The sole question that must be raised in regard to monopoly is its practicability or its impracticability. In short, "Will monopoly work?"

In 1850, before any man had witnessed the

remarkable industrial developments of the last forty years, the ordinary student, as well as the ordinary business man, would have said unreservedly that competition is a good thing. He might have added, "It is a good thing because it works." The experiences of the later nineteenth century showed that however good a thing competition might be, there was a better thing, namely, co-operation. The business world did not work this statement out theoretically. It had tried competition. It had grown accustomed to competition. With this background of experience, the business world experimented with co-operation. The latter form of organization appeared more advantageous than the former, and the business world cried: "Competition is dead—long live co-operation and combination."

There is no chance that this generation will go back to the competitive regime of the early nineteenth century. Society never goes back. There is a question, however, as to whether the present generation will continue the monopoly regime of the early twentieth century. The answer to that question depends entirely upon the effectiveness or ineffectiveness of monopoly.

What has happened where monopoly has been tried? How has monopoly succeeded? Or better still, Will the monopoly of natural resources accomplish what it was intended to accomplish? Upon the answers to these and like questions must depend the fate of our system of privately monopolized natural resources.

7. *Ownership as Opportunity*

Our forefathers thought that ownership would lead to opportunity. They failed to see in it the seeds of monopoly.

The early colonists accepted a system of private ownership of natural resources. They had fled from the tyranny of landlord-dominated Europe, with an abiding dread in their hearts of the oppression which grew out of a concentration of wealth control in the hands of a small ruling class. They had lived for generations in or near European countries which were suffering from the burden of a landed aristocracy which was able to exercise formidable power over all of the institutions of society.

These early colonists enunciated the principle of equal opportunity religiously and politically, because the weight of feudal oppression had been felt in church and state. At that time there was no clear idea abroad regarding the importance of the economic forces behind church and state. They, in themselves, were looked upon as the cause of oppression, and the early settlers declared their liberation from both. Men in the new world were to be free and were to have equal opportunity.

There were instances in which the colonists denied equal rights. New Amsterdam attempted the Patroon system, under which the ownership of the soil should continue in the hands of a select landlord class. Other colonies were furnishing land free to settlers, and were even giving

bounties in the form of tools and livestock to any one who was willing to take land and cultivate it. The competition was irresistible, and New Amsterdam was ultimately forced to do as the other colonies did and allow free opportunities in the use of the earth.

The argument underlying the free use of natural resources was simple and, from the viewpoint of those times, irresistible. The men and women who founded the colonies had left the despot-ridden countries of the Old World, seeking a place where they might think and believe, free from oppression. Their experience told them that landlordism and despotism meant the same thing. They had been brought up in countries where practically all of the desirable pieces of the earth were owned by a small class and were handed down from generation to generation in the same families. The rest of the human race must work for and pay tribute to these land-owners. Feudalism was built on this assumption. The duties which the feudal baron owed to his tenants fell into disuse; the rents which the tenant paid to the feudal baron were transmuted from rents in kind to rents in money, and the peasant was compelled to surrender a great portion of the products of his toil in return for the right to live on the earth.

In the days of the English Commonwealth, under Cromwell, the Digger Movement gathered its strength. The people who had been driven off from the common land as it was enclosed by

the great land-owners, reasserted their right, but without avail, to a use of part of the earth's surface. Everywhere throughout Europe the belief held sway that God had intended the earth for the few, and that the many must pay tribute for the right to a foothold in their fatherland.

The remedy for landlord despotism clearly lay in the direction of individual ownership. "Give a man the possession of a barren rock," cried one of the champions of this movement, "and he will convert it into a garden." Acting upon this theory, the early American colonies granted to a man and his heirs forever the possession of those pieces of land for which he could secure clear title.

This plan of individually owned natural resources succeeded admirably in a new country. For every tree that was pre-empted, a score stood waiting for the next claimant; for every acre of land that had been claimed, there were a hundred still untilled and unsowed. The hills abounded in wealth, the streams were full of power. In the early days the forest, the rivers and the sea yielded a bountiful supply of wild animals which provided food and clothing. All of these things might be had for the taking, and to no one might they be denied, because each man could get them for himself.

8. The Fruits of Ownership

This generation realizes with difficulty the meaning of a frontier. In colonial days the man

who was disgusted or discouraged stepped to the edge of civilization. He fed, clothed and outfitted himself—not at public expense, but at nature's expense.

Today, the United States is bounded by the oceans and by Mexico and Canada. There is no frontier—no “free for all.” America is living a new life.

With the ending of the nineteenth century the free land in the United States vanished. Long before that time the best of the natural resources—timber, minerals, water-power and fertile agricultural land—had been labeled “mine” by a relatively small group of powerful industrial and financial interests. The ownership of agricultural land was still widely scattered. The ownership of the more important timber and mineral resources was being rapidly concentrated.

What will be the result of this private ownership of natural resources? The time has come when that question must be faced and analyzed scientifically.

While resources were free for the asking, no man could put a price upon them and demand to be paid because of his land ownership. The moment that free land disappears, land ownership commands a monopoly price. In the centers of trade and industry this monopoly power is enormous. Where it is exercised over very rich resources, like coal lands or timber lands, the monopoly power of private ownership is likewise very great. Consequently, immense prices are

paid for pieces of land that a short time ago were practically valueless. Thus the hard, unyielding rock soil of Manhattan, all of which was sold by the Indians for a few dollars, is now valued in places at upwards of \$40,000,000 an acre. This immense valuation is the result of the presence of population, of trade and of industry. The owner of the land need have done nothing in the way of improvement.

The land upon which the City of Boston stands was valued at \$366,000,000 in 1890, and at \$672,000,000 in 1910. The interval of twenty years resulted in a doubling of these land values. The farm land of the United States was worth \$13,000,000,000 in 1900 and \$28,000,000,000 in 1910. During the same period the value of farm land in Illinois rose from \$1,500,000,000 to \$3,000,000,000; in Iowa from \$1,250,000,000 to \$2,750,000,000; in Kansas, from \$1,000,000,000 to \$1,500,000,000. The fact that the land is limited in amount, and is in great demand, is sufficient to place upon it a high monopoly price.

The private ownership of natural resources was a scheme that was devised to stimulate thrift, energy and ambition. It was intended to give an opportunity for life, liberty and the pursuit of happiness.

When the principle of individual ownership was first resorted to the United States was a wilderness. Resources existed for all, and in abundance. Since that time free land has disappeared. The whole economic foundation of life has been revo-

lutionized. There is no more free land and the frontier has disappeared.

Each change in economic conditions gives rise to new needs and new relations. Social forms are modified because the basis for life is altered. Two generations ago the country's adjustment to life included a safety valve in the form of a frontier. The frontier meant cheap grazing land, free agricultural land, free timber and free minerals. Today each first-class piece of land in the United States has its price.

Sooner or later the American public must decide whether a system of private property in natural resources can work advantageously after free land disappears. Up to the point where land ownership carried with it no monopoly power, many legitimate justifications could be urged in its favor. Now that private property in land almost inevitably carries with it the power to lay a monopoly tax upon the industry of the community, the situation takes on a very different aspect.

9. Every System Must Produce Results

The system of private ownership of natural resources, like any other social institution, must be able to stand trial. Each social institution is a device adopted by society to accomplish certain results. The bow and arrow is a means of securing game. The family is a means of protecting offspring. One is an individual weapon, the other is a social institution. Each has a purpose.

The bow and arrow is adopted because it is

more desirable as a weapon than anything that preceded it. Neither the club nor the flint-headed spear is effective as compared with the bow and arrow. Once the bow and arrow is devised, it is used until some better weapon is discovered. The moment, however, that the better weapon appears it automatically replaces the bow and arrow.

The individual adopts the methods best calculated to insure the success of the things he wishes to do. His test of the effectiveness of a given means is the results which it accomplishes.

Society, in this respect, differs in no way from the individual. There are certain ends which society aims to accomplish. To attain those ends, men devise social institutions or social methods, as they might be called, such as the family, the state, private property in natural resources. So long as these institutions achieve the results for which they were established, they may hope to perpetuate themselves. If they fail in any particular to accomplish these results, they are attacked and ultimately demolished. In their places rise new institutions, better calculated to do society's work.

There is no law of society more inexorable than that which involves the survival of the fittest social institution. Given two ways of running an educational system, one less advantageous and the other more advantageous, to securing the results at which society is aiming, the more advantageous method must ultimately

triumph, because men, individually and socially, necessarily choose the things they believe to be to their greatest advantage.

10. Has Monopoly Succeeded?

The present system of monopoly in natural resources was devised to stimulate ambition, thrift and initiative. It was aimed to inspire men to put forth greater effort in order to avail themselves of the greater opportunities. At a time when there were more farms than men seeking farms, the private ownership of farm land did stimulate and energize. That day has passed, however. At the present time there are many individuals who would like to hold possession of every desirable resource in the United States. Therefore, the owners of these resources put a monopoly price on them and secure a return based on their resource ownership.

Another thing has happened which was not generally foreseen. The argument in favor of natural resource monopoly was based on the supposition that each man would take a piece of land large enough for him to cultivate, and that upon this land he would expend his own energies. Two things have intervened to prevent the realization of this hope. First of all, men took more land than they could use and held it for an increase in value. In the second place, successive generations have concentrated land ownership to a greater and greater degree.

So long as there were more farms than men,

it was difficult to get labor. Why should you till my land and reap my crops when for the asking you could get a farm of your own on which to expend your energies?

Today there are more men than farms. Those who do not own farms, in order to live, must work for those who do. Consequently, the owners, instead of expending their own energy in the work of production devise means whereby they permit others to use their property and to give them, in return for this use, an income upon which they may live without themselves expending energy.

There is a second but equally important point. A few people have secured possession of all of the valuable resources. Herbert Spencer, in the now famous ninth chapter of his "Social Statics," pointed out the inevitable logic of a system of private ownership in natural resources. One man, he explains, may own land to the exclusion of everyone else. There is no limit to the amount of land which any one man may own. Therefore, it is perfectly conceivable that one person should obtain possession of an entire township, county, state or nation, whereupon all other people would be trespassers and might remain only while they did the bidding of the man who owned the property.

Of course, the time when one man might own the United States is very far distant. Even today, however, most of the rich resources are in the hands of a very few people, who exercise

their right of ownership to exclude all others from the use of these resources until they, the owners, are ready to develop them.

It is now manifest that the ownership of the important resources—the choice bits of land—is concentrated in the hands of a very few people. The incentive is taken away from a great majority of people because the essence of the argument in favor of private ownership of resources was that the ownership would stimulate the owner. As a matter of fact, the owners of the great resources are not stimulated to do anything except to get other people to work for them upon their resources. In return for this concession, they secure a royalty or rent based on the resource value.

There is another angle from which the matter must be considered. Children are being born into the world every day. From the standpoint of ownership, what situation do the children face who are born at the present time?

Children now come into a world in which all of the “corner lots” are pre-empted. Most of the desirable property which is not in the hands of the government is labeled “mine” by some private holder. What chance has the prospective worker as against these owners? Merely this chance—unless his ancestors through their accumulations can constitute him an owner, he must work for the owners on their property until he has accumulated enough property to be an owner in his turn. In other words, the method of

private ownership in natural resources automatically excludes the new-born citizen from the use of those resources except on the terms—the monopoly terms—which the owners prescribe.

There is a broader point of view from which the matter may be analyzed. No social scheme can succeed unless it makes men well and happy. Any social system which produces a surplus of unhappiness is doomed to dissolution.

Even where a social system is well established, if any other plausible scheme promises greater health and happiness than the one in vogue, or if the proposed scheme grants happiness to a larger number of people than the one in vogue, it will ultimately be tried, and if it succeeds, it will replace the established order.

There is no necessity for people to adjust themselves to the conditions of monopoly. Monopoly is not a standard to which men must conform. It is a method of obtaining social results. If it achieves these results, it will be retained as a social institution. If it fails to achieve these results, it will be condemned and replaced by some social institution that appears to be ultimately more advantageous. Monopoly must be adjusted to human needs. Monopoly must result in health and happiness. Unless it does these things, it cannot hope to endure.

CHAPTER 2

THE ANTHRACITE PROBLEM

1. The Parties at Interest

THE situation that has prevailed in the anthracite regions during the past dozen years gives a vivid idea of the conflicts that must precede any solution of the issues that are raised by the private ownership of natural resources. The anthracite situation has been the object of investigation by the Federal as well as of the State government of Pennsylvania. Charges have been heaped upon charges, suits have been instituted and appeals taken. The phials of public wrath have been poured out liberally through various governmental and journalistic channels upon the vexing questions which the anthracite problem has brought to the fore.

The public is not alone in its impeachment of the anthracite situation. The mine workers likewise have played a part, and at times a very energetic one, in the assaults upon the coal mine owners. Labor disturbances have followed one another in rapid succession. At times they have been settled by means of a peaceable agreement; at other times they have resulted in prolonged, bitter strikes. Since 1898 the labor situation in the anthracite regions has never dropped far below the boiling point.

The public has vented its wrath. The workers have made their protest. Consumers and workers alike cry their anathemas against the exactions of the operators.

In striking contrast to the dissatisfaction displayed by the public and by the mine workers is the spirit of contentment evinced by the coal operators and the coal-carrying railroads. These parties at interest seem to have no cause for complaint, and they display no desire to alter the present status of the industry.

Each monopoly of natural resources by private capital leads to a controversy between the same parties. The consumer, the worker and the operator or owner of the resource, each represent a viewpoint. Thus far in the anthracite field, the operators are the only parties at interest who are convinced that things should be left as they are.

2. The Use of Anthracite

Anthracite is a concentrated, monopolized natural resource upon which tens of millions depend for fuel and tens of thousands for a livelihood. There is probably no resource of like value which affects directly a larger number of people.

Many resources reach the consumer by a round-about path. The iron ore travels a long road from the blast furnace to the watch-spring. A white oak undergoes many changes before it appears in the dining room table. Numerous processes intervene between the wheat in the field

or the hide on the cow's back and the muffins or the trim half-shoes.

Some resources never reach the consumer at all. The steel in the freight car, for example, merely transports the wheat that finally appears as muffins. The copper and wood in the locomotive do not even come into contact with the wheat. The steel rails, ties and ballast, the bridges and cement culverts make the transportation possible. Yet the consumer never even sees or hears of these things.

The relation between anthracite and the consumer is direct and immediate. Anthracite is used mainly for home consumption. In 1913, of the 71,296,000 tons shipped from the mines, 61.6 per cent were of sizes above pea. This total includes lump coal and broken coal, much of which is used for commercial purposes. At the same time it excludes pea coal, a great deal of which is now used for domestic purposes. Anthracite is sold chiefly in four sizes—egg, stove, chestnut and pea. For 1913 the shipments of these four sizes were as follows:¹

Egg.....	8,928,792 long tons
Stove.....	13,841,777 " "
Chestnut.....	17,065,632 " "
Pea.....	8,142,571 " "

Since pea, as shown by the recent change in its price, is now primarily a domestic and not a commercial coal, it appears that these four sizes of coal

¹ "Mineral Resources of the United States, 1913," Part II, page 889 *ff*.

alone account for about five-sevenths of the total amount of coal shipped. In other words, the amount of anthracite which goes every year to the consumers of the United States is approximately 50,000,000 tons.

No accurate statement can be made of the number of persons who use these 50,000,000 tons of anthracite; but if the average sale per family is five tons, 10,000,000 families (about 45,000,000 people) are dependent for their fuel upon the supply of anthracite. If the sale averages ten tons per family, about 22,500,000 people would be dependent upon anthracite. These figures are only approximations, but they give some idea of the enormous extent to which anthracite is used in the homes of the American people.

There were, in the United States in 1910, 91,000,000 people, living in 20,000,000 families. This makes just under five persons per family. If the suggestion in the last paragraph was in any measure correct, from a quarter to a half of the families in the United States depend more or less directly upon anthracite for their cooking and heating.

From a quarter to a half of the population of the United States is dependent upon the supply of anthracite coal, which comes primarily from five counties in the northeastern part of Pennsylvania. There is no other anthracite coal of importance now being mined in the United States. The whole anthracite industry is concentrated in one small section of

one State.¹ It thus affords an ideal opportunity for monopolization.

If the anthracite deposits were scattered, as the bituminous deposits are, through all parts of the country, monopoly would be more difficult. With the available supply of anthracite concentrated in one small area, the possibilities for monopolization are unexcelled.

The anthracite industry, although restricted in area, has a widespread influence through the large number of consumers who look to it for their fuel supply. The millions of families who depend entirely or partly upon the supply of anthracite coal for their fuel comprise the greater part of the population of the northern and eastern sections of the United States. Here is a great body of people, all using the output of a natural resource which can be supplied from only one tiny part of the area upon which these millions live.

Many workers are dependent upon the anthracite industry. The payrolls of the operators contain the names of 175,000 men and boys. In addition to this number, tens of thousands of persons employed by railroads and other businesses which depend for their existence upon the anthracite industry must be counted in as having a direct relation to anthracite.

3. The Supply of Anthracite

When mining operations began a century and a half ago, the three Pennsylvania anthracite

¹ For an elaboration of this point see "The Anthracite Coal Combination," Eliot Jones, Cambridge, Harvard University Press, 1914, Chapter 1.

regions contained approximately 19,000,000,000 tons of coal. Since that time, the amount taken from the mines or made unavailable by the abandonment of old workings is equal to about 5,000,000,000 tons, leaving an estimated reserve of 14,000,000,000 tons.

Apparently, the unused supply of anthracite is three times as great as the amount already used. Another important fact must be borne in mind, however. The amount of anthracite actually mined to date is only about 2,000,000,000 tons. The amount "wasted" and "left in old mines" is 3,267,500,000 tons. Under the system of privately owned resources, which was so generally relied upon to stimulate ambition and arouse initiative, for each ton mined a ton and a half was left unused. To be sure, some of the old mines are being reopened at great expense, and the coal that they contain salvaged. For the most part, however, this coal must be a permanent loss.

Experts figure that 25 per cent of the coal can still be secured from old mines and that 50 per cent of the coal can be had from the new mines. The total available supply of anthracite is therefore about 8,000,000,000 tons.¹

Taking the amount actually mined as a standard, it appears that the coal still in the mines is equal to seven times the amount of the product

¹ The figures on which these statements are based will be found in "Increase in Prices of Anthracite Coal," House Document No. 1442, 62d Congress, Third Session, p. 126.

to date and that the coal that can be made available for consumption is equal to four times the production to date. Anthracite is still, and for years will be, a resource that must play an important rôle in the life of the community.

At the present rate of mining, the supply of anthracite will last about one hundred years. Four generations of people will therefore look to the anthracite field of Pennsylvania as a source for their fuel supply. Discoveries and inventions may replace anthracite with some far more usable source of heat. Let the present situation continue, however, and for a century to come the anthracite field will present a problem to the American consuming public.

Although these figures are rough estimates, they are based on the best available expert knowledge. They may be incorrect in detail, but in the large they furnish conclusive evidence of the immense importance of anthracite to the consumer of today and of the great probability that for a long time to come anthracite will be a resource of the first importance to the American people.

Millions of consumers and hundreds of thousands of workers depend directly and indirectly upon the supply of anthracite. This supply, to the extent of 8,000,000,000 tons is still available for use. This and the succeeding generations must determine the conditions under which this anthracite shall be produced.

4. *The Basis for Anthracite Monopoly*

No less important than the facts regarding the available supply of anthracite are the facts that relate to the control of that supply. Here are millions of people who depend for their fuel upon one resource. Are they in a position to say how much coal shall be mined and under what circumstances? Their happiness and well-being depends, in part, on the anthracite coal which they use. Can they decide what shall be done in the coal fields?

Obviously they cannot. First, because the coal fields are privately owned under a system of property ownership that permits the owner to do practically as he will with his own. Second, because the virtual control of the anthracite fields is vested in a very small group of persons who make common cause wherever their interests are threatened.

The owners of the anthracite fields have succeeded in establishing a monopoly of the most absolute character through a system of intercorporate relations. There have been times when the monopolists were at a loss to make profits on their vast holdings of unused coal land. In recent years, however, the system of railroad control has brought huge benefits to the monopolists.

There are quite a number of sources from which may be gained some idea of the extent of the combination in the anthracite industry. The inquiries conducted by the Interstate Commerce

Commission and the Pennsylvania Railroad Commission provide much material. Some suggestions occur in the report by the United States Commissioner of Labor on the "Increase in Prices of Anthracite Coal following the wage agreement of May 20, 1912." Arthur E. Suffern devotes a long chapter of his book on "Conciliation and Arbitration in the Coal Industry of America" to an analysis of the anthracite situation. The most elaborate and complete study, to date, of the anthracite combination is that prepared by Prof. Eliot Jones, and published in 1914. Professor Jones has gone carefully into the corporation reports, the various investigations of the anthracite industry, thereby securing data from the corporation as well as the governmental point of view. Professor Jones' book gives by far the best summary of the co-operative activities of those who own and control the anthracite mining operations.

The anthracite field has for many years been the scene of attempts at combination, particularly between the carriers of coal and the coal operators. During the later years, however, the combinations have been primarily between the coal-carrying railroads.

5. Unsuccessful Combinations

The first combination to control the anthracite industry was formed early in 1873. From that time on to 1898 there was a succession of combinations, each of which was dissolved because

of the lack of group feeling among the participants.

The combination of 1873 was a combination of carriers. The Philadelphia and Reading, the Central Railroad of New Jersey, the Lehigh Valley, the Lackawanna, and the Delaware and Hudson were responsible for the formation of the combination. No attempt was made to restrict the output, but the amount of coal shipped to competitive points was limited in the following manner. An estimate was made of the total amount of coal at tide-water points during the year, and this total was divided among the companies entering into the agreement, according to the capacity of the mines shipping over the various lines. This agreement was to be enforced through a Board of Control composed of the presidents of the railroads involved in the combination.

While the combination lasted it had a marked effect. Prices were higher and more stable as a result of the combination.

Between 1876 and 1878 the anthracite coal trade remained under competitive conditions. There was a considerable increase in the production of coal. Prices fell and competition proved to be the death of profits. Even those who succeeded in the competitive wars felt the onus of reduced earnings. The effects of the competition were so marked that, to quote Professor Jones (p. 44), "In 1877, at least four of the important transportation companies, each of which had been paying liberal dividends for sev-

eral years, suspended their dividend payments, and several others reduced their customary rates." The results of competition were so evidently disastrous that a new effort at combination was made in 1878. For the next few years, while there was no actual allotment of the amounts of coal which any railroad might produce during the year, there was "a friendly understanding among the companies" which resulted in "a combination, perhaps as effective as a formal agreement."¹ Under this tacit agreement, the number of days during which production of coal should be discontinued was regulated in accordance with the demand. For example, during 1880, Dr. Jones reports that the "production of coal was restricted 88 days," and cites the annual report of the Reading Railroad as authority for this statement.

During the next few years a number of railroads changed hands. There was considerable buying and leasing, and interwoven with these commercial activities there was a strong effort at more complete combination. As a matter of fact, no effective organization was formed until the Reading system came into being.

The spectacular rise of the Reading interests makes one of the most significant chapters in the history of modern finance. The Reading Railroad leased the Lehigh Valley Railroad, and through the incorporation of the Port Reading Railroad it was able to secure a lease of the

¹ "The Anthracite Coal Combination," *op. cit.*, p. 46.

Central Railroad of New Jersey. The Philadelphia and Reading Coal and Iron Company also secured control, through a lease, of the Lehigh Coal Company, and by another business arrangement, of the Lehigh and Wilkes-Barre Coal Company. The Lehigh Valley Coal Company was a mining company of the Lehigh Valley Railroad, and the Lehigh and Wilkes-Barre Coal Company was "practically owned" by the Central Railroad of New Jersey. As a further asset in the organization of the anthracite field, President Sloan of the Lackawanna announced "that the management of the Lackawanna was in sympathy with the plans of the Reading." "The Reading Railroad had thus secured control of two competing railroads and their coal companies, and had established, through purchases of stock and interchange of directors, a community interest with still another railroad (the Lackawanna)."¹ As a result of these transactions the Reading interests controlled 70 per cent of the total shipments of anthracite coal. At the same time, the Reading purchased largely of Boston and Maine stock, and an effort was made by the Reading system to secure a new market in New England.

The effect of the combination on prices was immediate. Stove coal advanced more than a dollar per ton between February and September, 1892. This advance led to a public outcry; the Attorney-General of New Jersey applied for an injunction to dissolve the lease by which the

¹ "The Anthracite Coal Combination," *op. cit.*, p. 52.

Reading held the Central Railroad of New Jersey; the attempt of the Reading to enter New England met with hostility from an influential New York banking house; the credit of the Reading, already over-strained, broke during the panic of 1893, and in February of that year the Reading failed. From this failure until 1898 there was no effective union of anthracite interests.

The strenuous efforts made between 1873 and 1898 to perfect an anthracite combination are ascribed by Professor Jones to two causes: "First, the need of meeting the interest charges upon the huge obligations incurred by the companies in attempting to secure control of the coal lands. Second, the intermittent character of the trade." (Pp. 57-58.) The experience of the railroads during this period taught some emphatic lessons. While an effective combination was maintained, prices went up, but so did dividends. Combination and comfortable profits, to all appearances, were synonymous terms. On the other hand, the absence of combination led to bitter price wars, to lower prices, to vanishing dividends. Competition was deadly; combination revived profits.

The lesson was plain. The moral was beyond question. The anthracite carriers accepted it and went about the formation of an effective combination.

6. An Effective Anthracite Combination

Since 1898 the co-operation between the anthracite operators and carriers has been most com-

plete. Professor Jones ascribes this co-operation to "railroad consolidation"; "the development of a community of interest among the railroads"; and "the practical elimination of the independent operators." (P. 59.)

The Erie Railroad, early in 1898, purchased a controlling interest in the New York, Susquehanna and Western Railroad. The purchase was effected by means of a large Erie stock issue, the shares of which were exchanged for Susquehanna Railroad stock. The purchase was carried out by the Erie in order to remove the danger of competition which the rapid development of the Susquehanna threatened.

The movement toward railroad consolidation received a great impetus through a purchase by the Reading Company, which was the holding company of the Philadelphia and Reading Railway Company, and of the Philadelphia and Reading Coal and Iron Company, of a controlling interest in the Central Railroad of New Jersey. Court proceedings and bankruptcy had compelled the Reading interests to relinquish their former hold on the Jersey Central. The obstacles to consolidation were removed by the purchase in 1901 of 145,000 Central of New Jersey shares (53 per cent of the total outstanding stock) at \$160 per share.

The price paid for the Jersey Central stock was high, as compared with market quotations, but "the combination of the two railroads placed nearly one-third of the total shipments of coal

under the control of the Reading Company." For the future, the advantage was even greater, because the Jersey Central owned the second largest reserve supply of coal. Through the acquisition of this reserve, "the Reading system owned and controlled about 63 per cent of all the unmined coal in the state of Pennsylvania."¹

The President of the Reading Company gave the following explanation of the purchase of the Central of New Jersey by the Reading Company:

"The Reading must get to New York over the Jersey Central system. . . . In December, 1900, I happened to be in New York and I was told that the gentlemen who controlled the New Jersey Central were tired of it and that the stock was for sale. I was also told that the Baltimore and Ohio Railroad had made an offer for this stock, which the parties had refused because they considered it too small. This information was a great surprise and I at once went to Mr. Morgan, who was a voting trustee of the Reading Company and told him that the situation was most alarming; that it would be the ruin of the Reading property if an antagonistic company got control of the Jersey Central, or if the Baltimore and Ohio got us by the throat in that way and could control our terminals in New York, and that therefore the matter called for prompt action. I told him then that I always thought that the Jersey Central could be legally bought; that the limitations in the laws of New Jersey applied only to leasing and that, under the powers of the Reading Company and under the statutes of New Jersey, we could undoubtedly buy a majority of the stock. He told me to keep my own counsel and look up the whole subject and see what could be done. I came home and I made a critical and careful examination of the reports of the New Jersey Central Railroad for a number of years, to see what in my judgment its stock would be worth, taking into account the future possibilities. I also took up the ques-

¹ "The Anthracite Coal Combination," *op. cit.*, p. 62.

tion of how we could buy it and finance it. I made a report to Mr. Morgan in about a week's time. It took me a good while to get all the information I got, because I had to do it secretly, you know, as counsel. I sent it to Mr. Morgan. . . . When I got home, one night in Reading, there was a call at the telephone and I went to the phone and Mr. Morgan was there, telling me to come to New York immediately, that I must come on at once about that Jersey Central business. I went to New York the next morning. I saw Mr. Morgan. . . . He said to me, "What do you think is the fair price?" I said, "I have named what I think is the fair price in there." He called for Mr. Baker, who was the chairman of their committee, or a leading man in it. Mr. Baker came over and we sat down and dickered for about five minutes, until Mr. Baker said they would take one hundred and sixty and I said I thought I would advise that, and I went to the phone and called up Mr. Welsh and Mr. Harris, who were, with myself, a majority of the executive committee and they said, "Yes," and the deal was closed. That is the whole story. We did not even make a writing about it. Mr. Baker said he would undertake himself and with Mr. Maxwell and friends to deliver us a majority of the stock."¹

Professor Jones feels that President Baer overemphasized the danger of competition. He seems to have minimized the obvious desirability of securing so large a proportion of the future coal supply.

These transactions placed the Reading in a position of supreme importance. Holding nearly two-thirds of the available supply of unmined anthracite, and with a third of the annual shipments from the anthracite regions, the Reading interests were in a position to exert a great influence over the anthracite industry.

¹ "The Anthracite Coal Combination," *op. cit.*, pp. 63-64.

The movement toward combination was furthered by a large extension of control by a number of other railroads over coal companies and coal lands. These developments placed under the direct control of the coal carriers the unmined anthracite and the machinery of production. They already owned the means of transportation. The control was thus made absolute, from mine to consumer.

7. Railroad Unity

Harmony in the anthracite coal fields has been furthered by the establishment of a greater degree of common interest among the railroads. This has been made possible through the inter-ownership of stock and through interlocking directorates. During the early periods of combination tonnage division had been resorted to as a method of establishing a community of interest. The newer device has proved far more effective. Professor Jones gives the following instance of the method pursued in carrying forward the movement.

“An important step in bringing about greater unity of action in the management of the coal trade through the interchange of stock ownership was the joint purchase by several of the coal roads of a large block of the stock of the Lehigh Valley Railroad. Early in 1901 the Lake Shore and Michigan Southern, owning over 21.6 per cent of the stock of the Reading Company and in turn controlled by the New York Central, agreed with the Reading Company, the Central

of New Jersey, the Lackawanna and the Erie to purchase \$5,700,000, \$1,000,000, \$1,600,000, \$1,850,000 and \$1,850,000 respectively—in all \$12,000,000—of the stock of the Lehigh Valley, or nearly 30 per cent of the total stock. The stock was not all purchased at the same time, but it is clear from President's Baer's testimony that the railroads jointly agreed to purchase the stock, for in his testimony he said that the Lehigh Valley was in bad shape, and it was thought very dangerous to let it go into a receiver's hands, because of the effect it would have on the other railroads and on general business.

"After talking that over with a number of gentlemen, Mr. Morgan being anxious that it should be done, I came over to Philadelphia and saw Mr. Stotesbury and suggested that he see the trustees of the Packer estate and of the college—the Lehigh University had an interest in it. We agreed to buy the stock. Then we divided it up between the four systems. I insisted that the Lake Shore and the Vanderbilt System, which was the strong system, should take a big block of the stock and the rest of us should not be loaded down, because I did not know whether we could save the Lehigh Valley.

"After the purchases had been consummated, Mr. Thomas, who had been president of the Erie Railroad, was elected president and a director of the Lehigh Valley; Mr. Baer, president of the Reading System and of the Central of New Jersey, became a member of the Executive Com-

mittee and of the Board of Directors, and Mr. J. R. Maxwell, Mr. G. F. Baker and Mr. H. McK. Twombly, all officers or directors of some of the other companies, became directors of the Lehigh Valley. The anthracite coal railroads thus virtually secured control of the Lehigh Valley and brought it into assured harmony with the controlling interests in the anthracite coal trade."¹

8. Coal Mine Control

The establishment of interlocking directorates has worked toward the same end. The presence on one Board of Directors of a man representing other transportation, mining or industrial interests goes far toward bringing these interests into closer working harmony.

Another important factor in the development of an effective anthracite combination has been the elimination of independent operators. This has been done in two ways: first, by purchase; second, by the general establishment of percentage contracts.

An interesting instance of this purchase method is the use made by the Reading Company interests of the Temple Iron Company, which had a charter granting it very broad powers. Simpson and Watkins, who were large independent operators, were bought out through the Temple Iron Company. The stock of the company was largely increased; bonds were issued, and through the

¹ "The Anthracite Coal Combination," *op. cit.*, pp. 68-69.

firm of J. P. Morgan & Co., the Simpson and Watkins property was sold for \$5,000,000. Through an involved financial transaction, the Temple Iron Company finally obtained title to the property. The Reading Company, the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Erie and the New York, Susquehanna and Western—all protected the credit of the Temple Iron Company by agreeing to take certain percentages of the capital stock of the company and of its funded debt. These percentages were determined by the proportion of anthracite tonnage handled by each railroad. The purchase agreement became effective January 1, 1904. By means of a proxy the practical control of the Iron Company was left with the president of the Reading interests. "He and the presidents of the roads entering into the guarantee were elected directors of the Temple Iron Company, as were also a few personal friends of Mr. Baer."¹ Although the original agreement included only part of the anthracite roads, "the other anthracite coal roads, except the Pennsylvania, have, since 1899, at some time or other, been represented on the directorate of the Temple Iron Company."²

An effort made by the Pennsylvania Coal Company to build an independent railroad to tide-water led to the purchase of the company, through the firm of J. P. Morgan & Co., by the Erie. This

¹ "The Anthracite Coal Combination," *op. cit.*, p. 80.

² *Ibid.*, p. 82.

gave to the Erie the full tonnage of the Pennsylvania Coal Company, which was producing in 1899 nearly 5 per cent of the total anthracite coal shipments.

A number of other purchases were effected about the same time. "Since 1900, numerous other firms have been purchased by the different railroads or by their subsidiary coal companies."¹ The railroads purchasing coal companies included the Delaware and Hudson, the Pennsylvania Railroad, the Lehigh Valley, the New York, Ontario and Western, and the like.

The remaining independent operators were brought into close affiliation with the carrying railroads by means of percentage contracts. After a long history of conflict between the railroads and the producing coal companies, a form of contract was drawn up which provided that the coal company should sell all of its coal to the contracting railroad; that the contracting railroad was to call for this coal as the conditions of the market seemed to require; that the call for the coal should be as equitable as possible, and that for all sizes above pea, "sixty-five (65) per cent of the general average free on board prices of said sizes received at tide-water points" should be paid by the railroads to the producer.

These contracts, since modified by the United States Supreme Court, gave stability to the business of the producer. At the same time, they

¹"The Anthracite Coal Combination," *op. cit.*, p. 85.

secured to the coal operators an increase in the price which they received for their coal. The operators "practically surrendered forever their independence, agreeing to sell to the railroad, or its subsidiary coal company, their entire future output, to be delivered in such quantities and at such times as the buyer dictated. Mr. Simpson, of the old firm of Simpson and Watkins, testified before the United States Examiner in a recent suit that the railroads would not give him a contract for his coal, unless he made the contract for the life of the collieries."¹ The operators seemed to have been willing to enter into these agreements because they could thus secure a higher return for their coal than they would have been able to secure through any means of independent marketing at their disposal.

9. The Anthracite Problem

The anthracite problem as it stands today, may be summarized in these terms. A valuable natural resource, localized in one small geographic area, is depended upon by millions of consumers and by tens of thousands of workers. For years this resource has been the object of constant public attention. The consumers have clamored against high prices; the workers have demanded higher wages and better conditions of labor. Meanwhile the owners of the resource have been actively engaged in efforts to increase their profits.

The attempts of the owners of the coal fields

¹ "The Anthracite Coal Combination," *op. cit.*, p. 93.

to secure larger profits have culminated, since 1898, in a combination which has virtual control of coal lands, coal mines and coal-carrying railroads. The coal land owners have thus put themselves in control of the means of marketing as well as the resource and the means of producing coal.

Here is a resource privately owned. The ownership of the resource, as well as of the means of developing and marketing it, are concentrated under the control of one group of interests. This is the logical end of Herbert Spencer's reasoning, except that, instead of securing control over an entire country, the anthracite interests have secured control over an entire industry.

The question now arises—given a natural resource of wide public importance, privately owned by one group of interests which also controls the means of transportation, what will happen to the consumer who uses the product of the monopoly, to the worker who sells his time and energy to the monopoly, and to the individuals who participate in the property ownership by the monopoly?

CHAPTER 3

THE CONSUMER AND ANTHRACITE PRICES

1. The Consumer's Point of View

THE consumer is vitally interested in the proper use of natural resources. He derives his livelihood from their products. His well-being depends upon the quality of these products and the prices at which he can get them.

The consumer's interest is the largest and must always be the dominant interest in dealing with any natural resource. Every member of the community is a consumer. Children and old people are consuming without producing. Those who are engaged in productive work are both consumers and producers. Each member, old and young, in the entire living population is a unit in the body of the consuming public. The consumers are the community. Anything which affects the consumer therefore affects the entire community.

The consuming public outlives any individual in the community. There are 25,000 people in your city today. Ten die and ten are born. There are still 25,000 people. Each of these people is a consumer. Individuals come and go. The consuming public persists.

The figures worked out by expert mining engineers indicate that unless some adequate substitute is found, the consuming public during the

next century will depend more or less upon anthracite for its supply of fuel. The personnel of this public will change. The body of it will remain. There will be millions of people in the United States to whom anthracite will be a resource of real and immediate significance. The anthracite problem as it exists today in the northeastern corner of Pennsylvania for a long time will bear an intimate relation to the well-being of a great body of American consumers.

2. The Status of the Consumer

Everything that is made is intended, directly or indirectly, for use. Any manufacturer will tell you readily enough that he is not in business for his health. He spends his time turning out a product which someone wants. The manufacturer whose products supply no wants will sell no goods. Manufacturing is carried on for the purpose of giving people things that they desire.

All business is based on the wants or demands of the consumer. Coal is broken in certain sizes because people want those sizes. The price of chestnut coal is higher than the price of certain other sizes because there is a greater demand for it than for any other of the domestic sizes.

Unless someone wanted it, no coal would be mined. At the time when there was no apparent use for the smaller sizes of coal—buckwheat, rice and dust—they were thrown out on the culm dump with the other refuse of the mine. As soon

as it was found that these finer grades of coal could be used, they acquired commercial value. In some cases the owners of great culm dumps were better off than the owners of mines. The culm was washed over and the fine coal sold at a good profit.

The consumer is the objective point of productive activity. He is more than that. He is the beneficiary of productive activity. He is even more than that. He is the arbiter of productive activity.

Every purchase is a vote. The consumer (purchaser) is constantly engaged in voting productive activities in or out of office.

At one stage in the development of society everyone depended upon soft soap which was made in the home. At another stage hard soaps became commercially practicable and were made and sold in great quantities. At the present time, powdered soaps are coming into favor. Each time that a consumer buys a washing powder in preference to a hard soap he votes in favor of washing powder and against hard soap. There was a time when oatmeal stood under the grocer's counter in a barrel. Today it is sold in packages. To be sure, the cost is greater, but there is the advantage of greater cleanliness and greater certainty as to the correct weight. Each consumer who buys oatmeal by the package rather than in bulk votes against oatmeal in bulk and favors package oatmeal. So effective has this vote been in recent times that bulk oatmeal is almost

never met with in the large centers. In its place there are numerous brands of package oatmeal. The consumers have voted bulk oatmeal out of office.

The consumer need not be intelligent in order to vote. He need not even be conscious that he is voting. When he puts down his ten cents for the package of oatmeal he makes the decision which determines that oatmeal shall be wrapped in packages rather than sold in bulk.

No consumer can escape voting. Each purchase that he makes registers his decision, even though it be an unconscious one. The consumer is thus able to stimulate one kind of production or to retard another. He is able to make one brand of goods succeed at the expense of another. Advertising is the means that the producer takes to make the consumer vote in his favor.

There is a sense in which the consumers are the dominating factors in the industrial world. If the consuming public were effectively organized, it might decide that one brand of breakfast food should remain on the market and that another should go; that one kind of clothing should be worn and that another kind should be discarded. Unorganized as it is, the consuming public follows the fashions rather blindly, but none the less effectively. The decision of the consumer to wear or not to wear a certain type of hat determines whether the manufacturers of that kind of a hat shall be prosperous or go bankrupt.

3. *The Rights of Consumers*

Consumers have certain rights as regards themselves, as regards those dependent upon them, as regards the character of goods and as regards the price of goods. Some of these rights are well recognized, others are still indefinite.

The consumer has a right as regards himself and those dependent upon him. He has a right to know, for example, that when he buys a food product, his health will not be in danger because of poisonous preservatives. The consumer has another right entirely independent of his health or well-being—that is his right to have goods as represented. The markets of the East teem with traders whose one object in life is to misrepresent their goods. Among them the deceit of a customer is considered good business. This attitude was reflected until very recently in the well-known precept of the English common law *caveat emptor*—"let the buyer beware!"

During recent times a complete revolution has taken place in the relation of buyer and seller. The seller places certain goods upon his counter. If they are misbranded, he is liable to prosecution. In the great centers of trade, reputable merchants and manufacturers stand ready at any time to make good losses which the consumers feel that they have sustained in purchasing goods that are not what they were represented to be. The consumer is coming to regard his right to goods as represented as one of the fundamental rights in the economic world.

The third, and by far the most important right of the consumer, is his right to goods at reasonable prices. So significant is this right that it will be dealt with at greater length in a subsequent section.

The consuming public, comprising the entire community, is developing certain rights, and is coming to look upon them as belonging naturally to consumers. The consumers are not yet conscious of either their rights or their power. Nevertheless they are learning to understand both. They are insisting upon legislation, demanding reform, and above all else, they are interesting themselves in the prices of things.

4. The Obligations of Consumers

With rights go obligations. Consumers may justly assert certain rights to which they consider themselves entitled. At the same time, as consumers, they necessarily assume the obligations which go with their position as members of the consuming public.

The first obligation of the consumer relates to the kind of goods that he buys. A man with a ten-dollar bill in his pocket can direct the course of production within the limit of ten dollars. For example, he can vote in favor of the manufacturer of shoes by the purchase of a pair of shoes; in favor of a manufacturer of liquor by the purchase of champagne; in favor of the manufacturer of jewelry by the purchase of a watch charm. Hats and shoes are necessities; cham-

pagne and watch charms are luxuries. The consumer is under a blanket obligation to see that the proper kind of goods are produced. If the community is in need of hats and shoes, he must vote for hats and shoes.

The consumer must recognize an equally imperative mandate to conserve the welfare of the future. Grant for the moment that the public sale of alcoholic liquors in a community is disadvantageous to the on-coming generation. The consumer who casts his vote for alcoholic liquors, casts his vote against the future welfare of his own community. The moment he is convinced that alcohol will lower standards, he must vote against alcohol in favor of public health.

The second obligation of the consumer is less important. The consumer must vote for the right quality of goods. Every purchase of a cheap or tawdry article is a vote in favor of establishing such standards in the community. The conscientious consumer will cast his ballot for quality.

The third obligation of the consumer is in some ways the most important. The consumer must cast his vote in favor of reasonable conditions of production.

The conditions surrounding the production of goods differ very widely. Food, clothing and fuel may be turned out by men and women who are well paid and carefully safeguarded against the risks incident to work in their industry, or they may be underpaid, overworked and forced to face constant and unnecessary dangers to life and

health. Which of these two producers shall the consumer patronize? If he buys the goods produced by the first, he is voting for fair conditions of production. If he buys the goods of the second, he is voting for the inhuman conditions of life and work. Such contrasts exist in many industries, and between these two extremes the consumer must choose.

The consumer who takes his obligations seriously has only one path open. Whenever possible he must make his choice in a way that will banish every banishable evil from industrial life. He must cast his vote against child labor; he must cast his vote against the sweat shop; he must cast his vote against the exploitation of women; he must cast his vote against inadequate pay and over-work. In short, he must cast his vote against everything which in any way reflects unfairness as between industry and the worker.

If the American consuming public would recognize this obligation to the workers and would exercise its power by voting energetically against bad working conditions and in favor of good ones, it could revolutionize the lives of millions of toilers.

5. Reasonable Prices

Among the rights upon which the consumer insists, the most tangible one, and the one which must attract the most permanent interest, is the right to reasonable prices. The consumer

may not appreciate the quality of the goods. It is often difficult or impossible for him to know personally about the conditions under which the goods were produced. He does come into contact with prices. Each time that he purchases an article he faces the price problem.

Price is the one thing about goods concerning which the consumer can have a really accurate knowledge. Price is forced upon his attention each time he makes a purchase.

The consumer has a right and an obligation as regards prices. His right is the right to goods at a reasonable price. His obligation is the obligation to pay a price that will allow for fair conditions of production. Provisions for health and safety are frequently expensive. No matter what they cost, the consumer must expect to pay a price that will cover them.

The consumer believes, and with every color of justice, that he has a right to goods at a reasonable price. The difficulty arises when he attempts to make a concrete estimate of what constitutes reasonableness.

What is a reasonable price?

There is, of course, no final way in which such a question can be answered. There are limits, however, within which prices may be called reasonable and beyond which they may be called unreasonable.

The difficulty of defining "reasonable" as applied to price is enhanced by the difference that always exists between the viewpoint of the

producer and the viewpoint of the consumer. The producer wants high prices. The more he gets for an article, irrespective of its cost of production, the better he is off. With the producer high prices and prosperity are synonymous.

The viewpoint of the consumer is exactly opposite to that of the producer. The consumer wants low prices. The less he pays for an article, the better he is off. With the consumer, low prices and prosperity are synonymous.

Any examination of the reasonableness of prices must take these two points of view into consideration. In the nature of things, a price which would appear reasonable to the maker would seem high to the buyer. At the same time, the price which the buyer would regard as high would be looked upon by the maker as low.

It seems impossible, under the circumstances, to accept a standard of reasonableness set by either the producer or the consumer. Each approaches the question from a different angle; neither can fully understand the reasons which prompt the attitude of the other. There is nothing for it but to establish some scientific method of deciding reasonableness. Such a method would afford a price measure in terms of which the fairness of any given price might be decided.

6. Methods of Making Prices

Prices may be fixed by many different methods. First of all, there is the monopoly method of

charging for an article all that can be gotten out of it. The phrase commonly used to describe this monopoly price is taken from railroad nomenclature—"all that the traffic will bear." This phrase means that in making a given rate, the railroad charges all that it can possibly charge and still secure the traffic. Where competition is keen this price would be very near the cost of doing the business. It might even be fixed at a figure below the cost of production in individual cases. Where there is no competition, the rate is placed at a figure so high that the shippers will find it profitable to ship, but so that any addition to the rate would lead shippers to stop shipping. The rate maker aims to get the maximum traffic at the maximum rate. He is trying to get all he can.

The principle of monopoly price may be illustrated roughly in this manner. A group of independent ice companies which were in the habit of harvesting a million tons of ice a year and charging five dollars a ton for it, finds it cheaper to harvest half a million tons and charge ten dollars a ton. One-half the labor is saved, and the net profits are therefore considerably greater. To be sure, people may suffer or even die because of the high price of ice. This, however, is not a matter with which monopoly concerns itself. The object of monopoly is maximum profits and minimum expense.

The monopolist fixes his price without any reference to the cost of making the article. Thus, if you are working in a psychological laboratory,

you will find it necessary to purchase certain appliances. A patented device which costs twelve cents to make, sells for a dollar. If the manufacturer is asked, "Why do you charge a dollar for an article that costs twelve cents to produce?" he will reply that only a few of the articles are made, and the profit must necessarily be high on that few, and that besides, he has a monopoly on the manufacture of the article, and people will pay a dollar for it as readily as they will pay fifty cents. Why then should he not charge a dollar? The laboratory chief, when asked about the matter, says that the laboratory needs these appliances, and that there is no other way to get them, except from this firm, and therefore the price demanded must be paid. The producer has his patent monopoly; the consumer wants the product and is able to pay well for it. The result is a price many times the actual cost of manufacture.

Monopoly prices are fixed with the interests of the monopolist in view. There is no pretense at considering public interest. The purpose of monopoly is to make profits—the higher, the better. To be sure, a monopoly will not resort to illegal methods in order to make these profits. It will, however, use every legal means at its disposal to increase dividends.

7. Business for Profits

The supposition on which monopoly prices are fixed is common to the modern business world.

The business man is not in business for his health, nor is he in business in the interest of his competitors or of the people. He is in business, primarily, to make profits. Perhaps he is president of a corporation in which sums of money are invested by numerous people, who look to him, as business director, to return to them a six per cent dividend on their investment. Most people regard this dividend as legitimate, and the first duty of the corporation president is the duty of making the dividend. If, in order to make this dividend, he must raise the price of ice, bread or coal, he is popularly justified in doing so. The business world puts profits first. The business man is taught to make returns on his investment. The way to do this is to keep a generous margin between the cost of making a thing and its selling price.

The business man expects a fair return on his investment. What is an investment?

There is no general agreement as to what shall constitute an investment. Every enterprise that records a capitalization of half a million dollars does not represent the investment of so much money. Investment or business capital is made up, now in one way and now in another.

The capital behind many businesses has been invested a dollar of money for each dollar of capital. There are many businesses, however, in which the capital stock is based, not upon cash invested, but upon earning power. The books of a company show that during the past ten years it

has been earning \$300,000 a year; \$300,000 will be a 6 per cent dividend on \$5,000,000, therefore the company may be capitalized at \$5,000,000. A charter is secured; stocks are issued to the extent of \$5,000,000, and the company, being a well-managed concern and a stable business, continues to pay a regular dividend of 6 per cent on its capital stock. Now, it so happens, that in this particular case, the company controls a number of valuable patents, and because of this patent control, it was able to sell its product at a very high price. The men who established the business did not invest more than \$1,000,000 in it, all told, and the cost of replacing the plant at the time it was capitalized did not exceed \$2,000,000. The difference between the \$1,000,000 invested and the \$2,000,000 cost of replacement included \$1,000,000 worth of plant that was built out of earnings or profits. The investment was, therefore, \$1,000,000, the value of the plant was \$2,000,000, while the capitalization was \$5,000,000. In this case, the organizers of the company "capitalized earning power."

The popular mind looks upon the \$5,000,000 of capital stock as property. As a matter of fact, it is not tangible property at all, because the total value of the tangible property, new, would not exceed \$2,000,000. The \$5,000,000 represents tangible property plus good will, monopoly power and expectancy of future earnings. It is not tangible property, but earning possibility.

There is a sense, of course, in which monopoly

power is property. Since it will earn dividends, and since it may be transferred from hand to hand, a patent right may be regarded as property. At the same time, it is not investment in any sense of the word, and a very clear distinction must be made between the \$1,000,000 which was investment in this plant, the \$1,000,000 which was taken from earnings and used to build up the plant, and the \$3,000,000 which represented capitalized earning power.

It is perfectly conceivable that the earnings of the plant might be increased to \$400,000. For example, it might be true that the prices charged for the monopolists' products are not full monopoly prices. They may be represented by something less than the exercise of full monopoly power. They are not "all that the traffic will bear." It might be assumed that by increasing the price of its product, this concern, by advancing earnings to \$400,000 instead of \$300,000, could issue another \$1,000,000 of stock and pay 6 per cent upon it also. This last million would represent nothing less than the exercise of monopoly power.

8. Business for Service

The "get all you can" policy is not the only policy that is being followed in modern business. There is a large, and we have every reason to believe a growing, tendency for the producer to look upon his work as a profession and upon himself as a professional man whose business it

is to supply people with the things they need—the best things at the most reasonable prices. Such business men try to see how low they can keep prices.

One of the most striking illustrations of this point of view is the attitude which the Ford Motor Company has adopted towards its business. The original investment of the Ford Motor Company is small. The actual value of the plant is vastly greater than this original investment. The plant has been built out of earnings, and the company might readily capitalize not only the value of the plant, but the earning power of the plant. For example, if the Ford Motor Company's earnings last year were \$18,000,000, the business could be capitalized at \$300,000,000 and pay a dividend of 6 per cent.

The plan followed, in the case of the Ford Motor Company, is exactly the reverse of this, however. Instead of capitalizing its earning power and paying dividends, the company has chosen to increase the wages of its employees and decrease the price of its product to the consumer. If the Ford Motor Company were to capitalize at \$300,000,000, and were to earn 6 per cent on this capitalization, it is probable that no one would raise the least question in regard to the legitimacy of such a procedure. The reverse policy of sharing up the profits of the industry with the employees and with the purchasers has given rise to widespread commendation.

The Ford scheme is a new one. In the past, and particularly during the era of trust organiza-

tion which followed the Spanish-American War, earning power was capitalized in every direction, and great floods of bonds and stocks were issued against earning power as well as against tangible property. The business world told itself confidently that it had a right to everything that it could get. "All that the traffic will bear" was looked upon as a legitimate definition of business profits. During this period of business expansion great profits were reaped by the business interests, and the basis was laid for further profits by the issue of stocks and bonds based on earning power.

The Ford plant is a long step in the opposite direction. Mr. Ford seems to look upon the actual investment as the legitimate basis for earning power. He does not even care to capitalize the profits which have been turned back into the business. Instead, he aims to share his prosperity with his employees and the public in the shape of higher wages and lower prices.

The contrast may be put in these terms. A soap manufacturer discovers a new formula which greatly improves the quality of his soap and lowers the cost of production by 50 per cent. This manufacturer has been making a reasonable profit. His new formula reduces the cost of producing a cake of soap from 3 cents to 1 cent. In the past, his soap has retailed for 6 cents. Shall he pocket the 2 cents which his new plan saves him, or shall he give it to the public in the form of cheaper soap? The answer of the old-time business world was that he must pocket all of the 2

cents. The thought that lies behind modern business is that he must at least share his 2 cents with his employees, with the public or with both. In other words, the manufacturer must say, "I have perfected a means to give the public cheaper soap," with the same pride that the scientist says, "I have devised a means for preventing the spread of tuberculosis."

A long distance intervenes between the attitude toward the present method of doing business and the one suggested at the end of the last paragraph. There seems to be no question, however, but that the movement of a part of the business world is away from the most barbarous phases of the "all that the traffic will bear" doctrine, toward the idea of sharing with worker and consumer the accruing advantages of industry.

9. Prices and Earning Power

From the standpoint of the consumer, the matter sums itself up in these terms. If every business is to be organized and managed on the "all that the traffic will bear" basis, the consumer must organize some form of counter-activity that will regulate or eliminate monopoly power. Otherwise, he will be eaten up by the demands of the monopolized industries. If all businesses were built on original investment, if there were no watered values in capitalized earning power, the prices of most products now sold in the United States would be lower by many per cent than they are at the present time.

Take the railroads as an illustration. The Interstate Commerce Commission is at present engaged in a physical valuation of railroad property. No one can predict what the outcome of this will be, yet it seems very probable to many experts that the actual value of the railroad property today will be equal to the capitalization of approximately \$19,000,000,000. A question must be asked, however. How much of this \$19,000,000,000 of railroad property represents investment? First of all, there were the men and women who put their money into railroad projects. This money is a legitimate investment. Then there were the cities and states which subscribed to railroad securities. This money is in the nature of public investment. Then there were the numerous grants of agricultural, timber and mineral lands which were made by the State and Federal governments to induce the railroads to build. Then, in the fourth place, there were the immense increases in land values which have occurred during the past few years, and which, more than any other single factor, have raised the actual value of much railroad property to a point approximating its capitalized value. If railroad interest and dividends were today paid on the original cash investments, there could be a very considerable cut in freight and passenger rates. The railroads have no intention of doing any such thing, however. They have capitalized their public land grants just as they have capitalized all of their other assets, and on

these assets they propose to pay both interest and dividends.

The question of monopoly prices resolves itself into the question of the method by which prices are to be determined. The unyielding monopolist wishes to charge everything that he can get. The consumer demands that prices be fixed at a point that will yield a reasonable return on the actual business investment.

10. The Monopoly Principle and Anthracite

These general considerations regarding the status of the consumer, have a direct bearing on the anthracite problem. Anthracite consumers, like any other consumers, are the objective point of the productive process. Anthracite coal is produced in order that it may be consumed. If there was no demand for it there would be none produced.

The consumers of anthracite have certain rights. There is no question regarding the adulteration of anthracite, nor can any issue be raised in connection with the character of the goods. The question of reasonable prices necessarily comes to the fore as the chief problem involved in the anthracite situation.

The consumers' obligations in the case of anthracite are practically limited to the conditions under which the coal is produced. The public, during recent years, has taken a more or less effective stand in regard to the living and working conditions of the anthracite miners.

The dramatic labor struggles in the anthracite region have focused public attention on that question and stimulated in the great body of the consuming public a sympathetic attitude toward the anthracite worker.

11. Recent Movements of Anthracite Prices

The Bureau of Labor at Washington publishes figures showing the increase in the wholesale price of anthracite coal since 1890. In that year chestnut sold at \$3.35 per ton; egg at \$3.61 per ton; and stove at \$3.71 per ton. During the subsequent years prices ranged over a wide field. They were lowest in 1895 and highest in 1913. This holds true of each of the different grades of coal.

The increase in the price of chestnut has been greater than that of any other size. This is explained by the rapidly growing demand for chestnut as a kitchen fuel. The wholesale price in 1890 was \$3.35; in 1913, \$5.31. Egg advanced in price from \$3.61 to \$5.06; stove advanced from \$3.71 to \$5.06. The relative prices of three grades of anthracite appear in Table I, on the following page.

The extreme fluctuations in the prices of these prepared sizes of anthracite coal occurred prior to 1898. Since that time there has been an upward movement most rapid in the case of chestnut and least rapid in the case of stove coal. The movement is none the less effective in all cases. Between 1898 and 1913 the price of chestnut increased almost exactly 50 per cent. During

the same period, the price of egg coal increased 40 per cent and the price of stove coal 33 per cent.

TABLE I.—INDEX NUMBERS SHOWING THE RELATIVE PRICES OF CERTAIN GRADES OF ANTHRACITE COAL, 1890-1913.¹

<i>Year</i>	<i>Chestnut</i>	<i>Egg</i>	<i>Stove</i>
1890.....	93.3	100.6	97.8
1891.....	96.7	104.4	101.6
1892.....	109.7	110.8	109.4
1893.....	115.9	107.2	110.5
1894.....	98.5	94.3	94.9
1895.....	82.9	84.3	82.4
1896.....	98.9	98.8	100.0
1897.....	103.9	105.7	105.8
1898.....	98.8	100.2	100.1
1899.....	101.4	93.8	97.6
1900.....	108.9	99.7	104.0
1901.....	120.4	112.9	113.9
1902.....	124.0	121.5	117.6
1903.....	134.2	134.3	127.1
1904.....	134.2	134.2	127.1
1905.....	134.1	134.3	127.1
1906.....	135.2	135.3	128.1
1907.....	134.1	134.2	127.1
1908.....	134.1	134.1	127.1
1909.....	134.1	133.2	127.0
1910.....	133.9	133.9	127.0
1911.....	139.0	133.8	126.7
1912.....	146.9	140.0	132.6
1913.....	147.8	140.9	133.4

Previous to the combination of 1898, the importance of which has already been noted, the price of hard coal was subject to very much the

¹ Wholesale Prices, 1890-1913, U. S. Bureau of Labor Statistics. Bulletin No. 149. Washington, Government Printing Office, 1914, pp. 134-35.

same extremes of variation that may be noted in the price of bituminous coal at the present time. Thus, chestnut coal was \$3.35 in 1890; \$4.17 in 1893; \$2.98 in 1895. The price of egg coal was \$3.03 in 1895; \$3.80 in 1897; \$3.37 in 1899. The price of stove coal was \$4.19 in 1893; \$3.13 in 1895; \$4.01 in 1897. These figures typify the price movement upon which Professor Jones has so fully commented. Since 1898, however, fluctuations disappear and the climb of prices is consistent and regular.

The price of anthracite, like the prices of many other products, has risen during the past few years. Indeed, the operators have repeatedly alleged as one of their reasons for increasing the prices, the increasing cost of operating the mines. The real question of importance, therefore, centers, not in the price of the coal, but in the cost of the coal. If the law of monopoly price is to prevail in fixing the prices of anthracite, the operators will get all that they can. If some equitable basis for prices is to be maintained, the cost of production must be taken into consideration before the price of coal is fixed.

12. The Cost of Producing Anthracite

There has been a great deal of comment regarding the cost of coal production. Even after the vast body of data submitted at the investigation made by the Interstate Commerce Commission and the Pennsylvania Railroad Commission has been sifted, there remains some ground for specu-

lation. At the same time, the report made by the Bureau of Labor following the labor difficulty in 1912, cites several detailed reports of the cost of coal production that are quite illuminating.

Many consumers believe that the miner receives a major part of the \$7 which they are called upon to spend for a ton of coal. They have been told repeatedly by the coal companies that if the wages of the miners are raised, let us say 10 per cent, a corresponding increase must be made in the price of the product in order to recompense the coal companies for the increased cost of production. As a matter of fact, the mining costs constitute a comparatively small element in the price of a ton of coal.

Company A, cited on page 97 of the Federal Report on Anthracite Prices,¹ is described as "one of those whose operating costs have most largely increased during the period under consideration." In 1904, according to the figures, the cost of coal at the colliery was \$2.046; in 1912, the cost was \$2.215. In other words, in 1912, the 8,671,013 tons of anthracite coal produced by this company cost, on the average, \$2.22 at the mine. The company reported in that year a total of 27,463 employees. The \$7-ton of stove coal purchased by the consumer in New York or Philadelphia actually cost the coal mining company a little over \$2.

A number of items enter into the cost of coal. The actual mining, or cutting and loading coal,

¹ "Increase in Prices of Anthracite Coal," *op. cit.*, p. 97.

cost in 1912, 54 cents. Other labor costs inside the mine included the cost of maintaining roadway, of ventilation, of repairs, of pumping, of "general expenses," "extraordinary expenses," "improvements," bring the total labor cost up to \$1.309. In short, the actual cost of mining the coal and putting on the cars in the mine is only about two-fifths of the labor cost inside of the mine. Supplies, machinery and miscellaneous costs other than labor costs bring the net cost of coal inside the mine to \$1.674. Outside the mine, the labor costs are \$0.419 and the net outside costs \$0.541. Inside and outside costs combined give for the total labor cost on the ton of coal \$1.728, and for all costs \$2.215.

This illustration is only one of a number of instances, declared in the report to be typical, which the investigators brought to light in the course of their researches. The coal at the mine costs less than \$2.25 average, per ton.

These mine cost figures are most generous in the number of items they include. No effort has been spared to load on the cost account every item which it might be asked to carry.

A number of items are included in some of the cost statements which seem unwarrantably high. For example, on page 104, under "general expenses," one company charges \$0.052 per ton of coal for the expenses of the New York office. The same company includes in its charges such fixed charges as "taxes," "mine rents," "insurance," "law expenses," "other New York office

expenses," "real estate department," "sinking fund" and "extraordinary expenses." These items combined, add \$0.306 to the cost of each ton of coal. Even with these additions, the total cost of this company per ton at the mine was only \$2.179.

The consumer who pays \$7 for a ton of stove coal distributes his money somewhat as follows:¹

Ton of Stove Coal } \$7	{	Retailer.....	\$2.00	{	\$2.00 Retailer
		Freight.....	\$1.75	{	\$1.75 Freight
		Mine Profit.....	\$1.00	{	\$1.10 Operator
		Cost of Selling.....	\$0.10		
		Mine Up-keep.....	\$0.35	{	\$2.15 Mine Cost
		Other Labor.....	\$1.25		
		Mining.....	\$0.55		

The figures in the foregoing diagram are necessarily estimates. They will vary from one mine to another and from one part of the anthracite field to another. They are typical rather than specific, yet they give a rough idea of the way

¹ It should be noted that the mine profit of \$1 per ton applies only to the domestic sizes of coal. Some of the smaller sizes are sold at an apparent net loss, which, according to one line of reasoning, should be borne by the domestic sizes.

in which the price paid for a ton of coal is divided among the different parties at interest in its production. The figures for the mine costs are taken from the Federal Report on anthracite prices already referred to. The total wholesale price at tide-water, minus the freight rate, gives an amount equal to the mine costs, plus the cost of selling, plus the mine profit. The Federal Report on the Production of Coal for 1913, made by Edward W. Parker (pages 886 and following), seems to show a mine profit on domestic sizes of about \$1.00. The difference between the wholesale price and the retail price represents the amount that goes to the retailer. This amount, of course, is not profits. All of the expenses of the business must be taken out of it. Unfortunately, no figures are at hand that show what part of this \$2.00 is business costs and what part is profit. Thus, while the figures are approximations that would not hold true of this or that particular mine, they probably are true of the anthracite mines in general.

The figures as cited in the above diagram are suggestive. The entire cost of the coal on the cars, ready for shipment from the mines, is only a little over \$2.00, or less than one-third of the price paid by the consumer. Of this mine cost, only a quarter goes to the man who does the mining. All other labor costs, including the cost of keeping the mine in repair and the labor costs of improving the property, in so far as the mine can be improved, are equal to \$1.25.

The miner, together with every form of mine labor, therefore gets only \$1.80 per ton, or one-fourth of the total amount paid by the consumer.

It is evident from these figures that people must give over the idea that the miner is the chief beneficiary of the price paid for coal. The mine workers of all descriptions get only a quarter of it.

The mine operators and the railroads together get the lion's share of the money paid by the consumer for his coal. Mine profit, selling cost and railroad freight rate cover \$2.85, or two-fifths of the price of the coal to the consumer. This, it should be remembered, is secured by the coal owners and carriers after the cost of keeping up the mines (except taxes, interest and other fixed charges) have been charged against mine costs. The amount taken by the operator and the railroad is greater than the entire labor cost of each ton of coal, or even than the total mine cost of the coal.

When the consumer pays \$7 for a ton of stove coal, he is paying a far larger part of his money to the operator, the railroad and the retailer than he pays to the miner.

13. The Cost of Getting Coal to Market

The relation of the consumer to the price of domestic sizes of anthracite may be stated in a different manner. What are the actual costs of getting a ton of stove coal to market?

The mine costs are clear. For labor the cost

is \$1.80; for mine upkeep, 35 cents, making a total mine cost of \$2.15.

There is a cost of selling the coal, which is probably about 10 cents. This would bring the total cost of the coal, on the cars at the mines and sold, up to \$2.25.

The operating cost to the railroads of carrying a ton of anthracite, for example, to Philadelphia, is apparently about 50 cents, varying somewhat with the route taken.¹ Adding this cost to the total cost at the mines, it would seem that the actual cost of getting the prepared sizes of anthracite to the Philadelphia market, including the cost of selling, is about \$2.75, or about one-half of the wholesale selling price.

These are not final costs. The coal companies and the railroads must still pay their fixed charges. These figures do give some idea, however, of the relation existing between the amount that a consumer pays for coal and the fraction of this amount that gets into the hands of the men who mine and load the coal.

14. *A Better Explanation*

No one pretends that the price of anthracite is fixed with relation to its cost of production. Many of the producing companies have inadequate systems of cost determination, and the railroad officials representing the anthracite carriers have always insisted that it was impossible to make an accurate analysis of traffic costs as applied to one

¹ "The Anthracite Coal Combination," *op. cit.*, pp. 137-38.

commodity. However true this may be as a general proposition, the Interstate Commerce Commission and the Pennsylvania Railroad Commission found it possible to discover the costs of anthracite traffic.

There is another explanation of the movement of anthracite prices. While costs have not been seriously considered, monopoly possibilities have received increasing attention.

Until 1898 the prices of anthracite fluctuated as extensively as did the prices of bituminous. In 1898 an effective combination of anthracite carriers was formed. Since that time the price of anthracite was held stable until 1912. As if by common consent, all of the anthracite producers carried out an identical policy. In 1912, and subsequent to the strike, the price of coal was advanced 25 cents per ton, and again this was done with a truly astounding unanimity by all of the large anthracite interests.

The truth is that the effective combination organized in 1898 has been doing what it will with prices. The price fluctuations, which are as great in bituminous coal between 1898 and 1913 as they ever were during a like period, have no counterpart in anthracite. Anthracite prices display a stability which suggests a far-reaching monopoly power.

15. What should the Consumer Pay for Anthracite?

There is no one answer to the question, "What should the consumer pay for anthracite?" If a

reasonable price is to be charged, it must vary with each locality.

The method of ascertaining a price that will be reasonable in a given locality may be briefly indicated. It is understood, in the first place, that a reasonable price includes the cost of production, plus a reasonable profit on the actual money investment. This would not include a return on increased land values nor a return on stock issues. The basis of profits in each case must be cash investment. The elements in such a reasonable price would be as follows:

1. The cost of taking coal from the mine.
Plus a fair return on the actual investment.
2. The cost of transporting coal from mine to market. Plus a fair return on the actual railroad investment involved.
3. The cost of retailing from the railroad car on the siding to the consumer's cellar. Plus a fair return on the actual investment in the retailing business.

There is no way of putting these statements into accurate figures in the present limited state of the public knowledge regarding the anthracite industry. If the figures suggested in Section 13 of this chapter are approximately correct—that is, if the ton of coal, from the mine to the retailer, costs \$2.75 for operating expenses, and if, as

has been frequently asserted, \$1 a ton will market coal from car to cellar—the operating costs on a ton of coal would not exceed \$4 in a market like Philadelphia.

The sums that must be added to these operating costs, as representing a reasonable profit on the investment, must be determined. There is apparently no information now published that covers the field. An intelligent accountant, with full power to investigate and report, might throw a great deal of light on it without much trouble.

The consumers of anthracite are anxious to pay reasonable prices for their coal. There is just one way to proceed. The facts must be ascertained by men competent to determine such issues. Until such facts are a matter of public record, it is idle to speculate on the probable outcome of the investigation. It is worth noting, however, that there is every indication that the present prices of anthracite represent monopoly power rather than cost of production.

CHAPTER 4

THE WAGES OF THE ANTHRACITE WORKERS

1. The Economic Status of Anthracite Labor

A VISITOR to the anthracite coal fields would never suspect that the workers there were occupied in developing one of the richest of American resources. The annual production of only three minerals and fuels—pig iron, copper and bituminous coal—exceeds anthracite in value, while the value of the anthracite coal mined each year is twice the value of the gold and four times the value of silver mined annually in the United States.

Anthracite, be it remembered, is not only a valuable natural resource. Concentrated in area and important as a commercial product, anthracite has been brought under the domination of a small but powerful group of railroad interests.

The anthracite miner is therefore working in a region which, from a standpoint of natural advantage, is extremely rich; in an industry which produces a valuable and highly marketable commercial product; under the control of a number of splendidly organized railroads which work in substantial harmony. All of the advantages accruing from a modern business organization engaged in the development of a highly advantageous resource should be met with in

the anthracite region. If there is any industry in the United States which should contain a rich promise of advantage for its workers, it is the anthracite coal industry; yet the visitor to that region is brought face to face with conditions of hardship that probably are not exceeded by those in any other industrial community of equal size in the northeastern section of the United States.¹

An examination of the facts shows that anthracite labor seems to enjoy no particular advantage because of the fact that it is employed by a highly organized industry in the production of an immensely valuable commercial product. In other words, the benefits which must necessarily accrue from the peculiar advantages of the anthracite business do not accrue to the anthracite workers.

The most obvious method of contrasting the status of the anthracite miner with that of other men doing like work is to compare wages. The figures that are available do not allow any very accurate comparison between anthracite wages and the wages in other industries, because since 1902 there has been no adequate statement of anthracite wages. An appeal to operators and miners alike has failed to provide statistics of wages classified according to wage groups. Under the circumstances, the only recourse is to wage averages.

¹ For a description of the anthracite region, see "Anthracite Coal Communities," Peter Roberts, 1904; "The Coal Miners," F. J. Warne, 1905; and "The Coal Miner," E. A. Sailors, 1912.

Wage averages are, in one sense, extremely unsatisfactory, because the averaging-in of the higher paid and lower paid men does not give any accurate idea of the amount actually received by the individual man under consideration. At the same time, the averages do show, for a large group of men, the amounts received. These amounts, compared with similar averages for other groups, give an idea of the relation between the groups which are made the subject of comparison.

The anthracite mine worker is not paid at a higher rate than the workers in other forms of mining. The only recent collection of material on mine wages was made by the United States Census Bureau, and published in a special report on "Mines and Quarries," 1902. The figures are very much out of date, yet they give some idea of the relation then existing between the wages of anthracite and of other miners.

TABLE II.—PER CENT DISTRIBUTION OF WAGE-EARNERS
ACCORDING TO DAILY WAGE RATES IN THE PRODUCTION
OF ALL MINERALS AND OF CERTAIN MINERALS.¹

<i>Rate per Day</i>	<i>All Min- erals, Per Cent</i>	<i>Anthra- cite, Per Cent</i>	<i>Bitu- minous, Per Cent</i>	<i>Copper, Per Cent</i>	<i>Pig Iron, Per Cent</i>	<i>Gold and Silver, Per Cent</i>
Less than \$1.50.....	16.4	30.7	8.5	2.5	22.6	2.3
" " 2.50.....	61.8	84.8	73.8	54.6	90.1	10.2
" " 3.50.....	95.0	96.5	97.6	70.1	99.5	71.7
\$4.25 and over.....	.4	.7	.1	1.5	.1	1.3
Total men employed..	581,728	69,691	280,638	26,007	38,851	36,142

¹ Special Report on "Mines and Quarries," 1902. Washington, Government Printing Office, 1905, pp. 96 and 97.

This table shows that one-third of the anthracite workers received less than \$1.50 daily; that more than four-fifths of them received less than \$2.50 per day, and over nineteen-twentieths of them received less than \$3.50 per day. The wage rates paid in the pig iron industry are apparently lower than those paid in anthracite. The wages for bituminous, for copper and for gold and silver are higher. The anthracite wages are probably modified by the presence of a number of breaker boys. This fact undoubtedly accounts for the large proportion of persons receiving less than \$1.50 per day. However, anthracite wages appear at a disadvantage when compared with the other principal mineral industries in 1902.

These figures must not be taken too seriously. The census officials note the extreme difficulty of getting satisfactory wage facts. Moreover, the wages in Pennsylvania and California cannot legitimately be compared unless some note is made of the differences in the cost of living. Though not at all conclusive, these facts suggest that the anthracite miner enjoys no peculiar advantage because of the character of the industry in which he is working.

Some later and more specific figures lead to the same conclusion. The Secretary of Internal Affairs of the State of Pennsylvania, in his report for 1912, Part III (pp. 321-22), shows the following figures of average yearly earnings for anthracite miners:

TABLE III.—AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED IN THE ANTHRACITE COAL MINING INDUSTRY, WITH AVERAGE YEARLY EARNINGS AND AVERAGE DAILY WAGE.

	<i>Average No. of Wage- earners Employed</i>	<i>Average Yearly Earnings</i>	<i>Average Daily Wage</i>
Contract miners.....	43,201	\$728.84	\$3.54
Miners' laborers.....	33,292	495.92	2.40
Other inside men.....	48,024	541.23	2.63
Outside workmen.....	29,554	526.88	2.56
Breaker employees.....	16,238	358.17	1.74

The contract miners, in 1912, received an average wage of over \$3.50 per day. At the same time, the mine laborers, inside men and outside men received average wages of about \$2.50 per day, or in terms of yearly earnings, about \$525 a year.

It is interesting to note that the number of miners and of the other inside men is about equal. So is the number of mine laborers and of outside workmen. These four groups make up the bulk of the mine employees. With the exception of the contract miners, their annual earnings (1912) were in the neighborhood of \$525.

A comparison between the wages of Pennsylvania bituminous and Pennsylvania anthracite workers may be made from this same report. Such a comparison shows that in 1912 the bituminous miners as a group earned a higher return than the anthracite miners. The higher earnings of the bituminous workers are due, in part, to the higher average number of days in oper-

ation. Thus the bituminous mines reported 268 days in operation, while the anthracite mines reported only 206. An examination of the average daily wages shows that the anthracite miner makes more per day than the bituminous miner, while the inside and outside workmen make about the same in either case. The position of the anthracite miner differs from that of the bituminous miner. The anthracite miner is in one sense an employer, since the mine laborers work for him. The bituminous miner works for himself or in partnership with another miner.

Following are the wage figures for bituminous miners:

TABLE IV.—AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED IN THE BITUMINOUS COAL MINING INDUSTRY, SHOWING AVERAGE YEARLY EARNINGS AND AVERAGE DAILY WAGE.¹

	<i>Average No. of People Employed</i>	<i>Average Yearly Earnings</i>	<i>Average Daily Wage</i>
Miners (pick).....	54,178	\$674.04	\$2.52
Miners (machine).....	54,158	653.72	2.44
Other inside workmen over 16 years.	30,485	708.84	2.65
Outside workmen over 16 years.	21,489	630.96	2.35
Coke workers.....	12,004	610.22	2.07

Where like employments are compared, as of the inside men who make roads, repair timbering, drive mules, handle motors, and of the outside men who are carpenters, engineers, blacksmiths, dumpers, it will be found that the aver-

¹ "Annual Report of the Secretary of Internal Affairs," Part III, 1912, pp. 327-28.

age daily wages in anthracite and in bituminous mining are about the same, while the greater number of days worked makes the annual wage of the bituminous worker \$100 a year higher than the wage of the anthracite worker.

There is no evidence to show that the wages of the anthracite workers are higher than the wages of workers in other mining industries. On the contrary, there are facts which suggest that, if anything, the wages of anthracite workers are lower, in certain particulars, than the wages of some other miners.

2. Anthracite Risks

Much of the argument before the Coal Strike Commission was intended to show that the coal mining industry is an industry of peculiar risk, and that those who take up the work of coal mining, being employed in a particularly hazardous industry, should be paid in proportion to the hazards involved. The Commission summed up its opinion regarding the hazards of the anthracite industry by stating: "We find that it should be classed as one of the dangerous industries of the country, ranking with several of the most dangerous. The statistics so far available . . . do not show a greater hazard than obtains in some other occupations, notably in the fisheries and in those of switchmen and freight-train crews on our railroads. Still, the requirements are exacting."¹

¹ "Report of the Anthracite Coal Strike of 1902." Washington, Government Printing Office, 1903, p. 51.

If this statement is correct, the wage of the anthracite workers should reflect these unusual risks.

The accident rate for the anthracite mines is extremely high. The figures for 1913 showed that out of 175,310 employees, there were 624 fatal accidents, or 3.56 fatal accidents per 1,000 employees. The fatal accidents per 1,000,000 tons of coal produced were 6.81.¹ The report of the Interstate Commerce Commission for the year ending June 30, 1913 (Statistical Abstract of the United States, 1913, p. 284), shows 3,635 employees killed, out of a total of 1,716,380. The rate of mortality in the anthracite industry is therefore almost twice as high, taking all of the employees into consideration, as is the rate in the railroad industry.

The Anthracite Strike Commission referred specifically to the risks of railroad switchmen, and freight trainmen. The figures available do not give the accident rates for these particular groups. They do, however, give the facts for certain larger groups, which may be compared with those men who are occupied with the actual operations of mining. The figures for 1913 in the Annual Report of the Department of Mines, Part I (p. 52), show that the number of miners employed was 44,346; fatal accidents, 286; fatal accidents per 1,000 miners 6.45; number of miners' laborers employed was 33,973; fatal accidents, 148; fatal accidents per 1,000 miners'

¹ "Report of the Department of Mines of Pennsylvania," Part I, 1913, Harrisburg, 1914, p. 75.

laborers, 4.36; average number of days worked, 242. It is impossible to make an accurate comparison between these figures and the railroad figures, because it is not clear exactly what percentage of the railroad accidents referred to trainmen. The figures do show, however, that in 1912, there were 318,329 enginemen, firemen, conductors and other trainmen. The number of employees killed in collisions, derailments, "miscellaneous train accidents" and "other accidents in connection with railroad operation," "including employees not on duty" was 3,231, or 10.1 per 1,000 trainmen. The railroad crews presumably worked about 300 days a year (25 per cent more than the time worked by the anthracite miners). Some allowance should be made in the calculation for employees killed who were not trainmen. This would reduce the ratio of 10.1 per 1,000 somewhat. Reducing this ratio by 20 per cent, to make allowance for the less number of working days, it would seem that the fatal accident rates to men in railroad train crews were only slightly higher than the rates for contract miners and considerably higher than the rates for mine laborers.

There can be little question that the anthracite industry is a high risk industry, particularly for the men who are engaged in getting out the coal. To what extent is this high risk reflected in the wages of the anthracite workers?

The average yearly earnings of railway employees are rather difficult to determine. The

Interstate Commerce Commission reports the total number of employees of each grade and the total amount paid in wages to these employees by the railroads. Thus, for example, in 1912, in the Eastern District¹ there were 30,760 engine-men, 31,892 firemen and 66,346 trainmen. Conductors (whose wages are slightly lower than those of enginemen and considerably higher than those of firemen) are excluded because there is no occupation in the anthracite industry which compares in any way with that of the conductor. Their wages rank next to the wages of engineers. The average yearly earnings of these men, as shown by the Commission figures,² are: engine-men, \$1,522; firemen, \$901; other trainmen, \$940. It will be seen very readily that the railway employees are compensated on a scale far above the scale of the anthracite miners. If the amounts of skill and technical knowledge required of the engineman and the contract miner are approximately the same,³ some sort of a comparison may be made between the two. It would appear that the engineman gets twice as much as the contract miner. The fireman and other trainmen, compared with inside workmen, mule drivers, switch tenders, road menders and the like, show yearly earnings almost twice as great as the yearly earnings of miners' laborers and inside men.

¹ The Eastern District will be used as a comparison because the anthracite mines are in this district.

² Annual Report for 1912, pp. 28 and 29.

³ To date the engineman is a more highly educated and perhaps a more skilled man.

There is one fact that must not be lost sight of. The miner is working underground. The conditions surrounding his work are, in a sense, disagreeable. He is working in the dark. He is working often in damp places. Frequently the chamber is filled with dust. The railroad employee is, on the other hand, always above ground. With the exception of the enginemen and firemen, the work is not particularly dirty or disagreeable. Furthermore, the hours of the railroad employees are extremely short. It would seem that no unbiased person would hesitate for a moment between railroading and coal mining, as far as the relative agreeableness of the occupations is concerned. The figures show that the risk of the underground men is almost as high as that of the railroad employees. Nevertheless, the earnings of anthracite miners are only one-half the earnings of railroad men doing work of an approximately similar grade.

3. Anthracite Wages and Wages in Other Industries

The anthracite wages may be compared with the wages in other trades employing men. The comparison is made in these terms because the industries in which women and children are employed usually report lower wage figures than the industries in which men alone are employed.

The Annual Report of the Secretary of Internal Affairs for Pennsylvania, Part III, 1910,¹ gives average yearly earnings for anthracite and bi-

¹ Since that date most of the wage data have been omitted from the report.

tuminous workers and for workers employed in a number of other Pennsylvania industries. The number of days worked by the anthracite mines was 226; by the bituminous mines, 264. In other words, this year was an average year in both industries. The average yearly earnings in the anthracite mines were: miners, \$711; miners' laborers, \$468; other inside men, \$527; outside workmen, \$541. In the bituminous mines the average yearly earnings were: pick miners, \$588; machine miners, \$537; other inside workmen, \$641; outside workmen, \$518.

Compare these figures for miners with the earnings in certain other industries where large numbers of men are employed.

TABLE V.—AVERAGE YEARLY EARNINGS IN CERTAIN PENNSYLVANIA INDUSTRIES, 1910.

<i>Industry</i>	<i>No. of Men Employed</i>	<i>Average Yearly Earnings</i>
Pig iron.....	16,771	\$626
Steel production.....	11,319	693
Rolling mills.....	131,430	678
Tin and terneplate.....	10,240	779
Cement.....	10,882	527
Machinery.....	16,385	633
Locomotives.....	36,202	718

Only one industry (cement) reports earnings of less than \$600. Every group of miners with the exception of anthracite contract miners received annual earnings of less than \$600. The general level of wages seems to be lower in mining

than in the other great man-employing manufacturing industries of Pennsylvania.

Similar figures are available in the Report on Statistics of Manufactures in Massachusetts, 1911, page 2.

TABLE VI.—AVERAGE YEARLY EARNINGS IN CERTAIN MASSACHUSETTS INDUSTRIES, 1911.

<i>Industry</i>	<i>No. of Men Employed</i>	<i>Yearly Earnings</i>
Cars and shop construction.....	5,152	\$749
Electrical machinery.....	14,393	605
Leather, tanning and finishing.....	9,742	566

The Massachusetts figures, like those for Pennsylvania, seem to show that the large manufacturing industries employing men pay average yearly earnings as high as the earnings received by the anthracite contract miners and considerably higher than the earnings of the miners' laborers and inside and outside workmen. The wage figures published by the New Jersey Bureau of Statistics yield similar results.

There are employed around the outside of the mine large numbers of men—blacksmiths, carpenters, mechanics, firemen, common laborers and the like. The wages of this group average about \$525. The machinists, carpenters and "other shop men" employed by the railroads in the Eastern District are \$881, \$736 and \$687 respectively. (Annual Report, Interstate Commerce Commission, 1912, p. 29.) Here again the wage rate seems to be lower in the anthracite than in other man-employing industries.

As far as the relative wages of anthracite miners and other workers in occupations of a similar grade are concerned, it would seem that the balance is in favor of the workers in other occupations. Despite the high risks of mining, most other occupations employing men in large numbers pay higher wages or wages equally high. When a comparison is made between anthracite and occupations of equal risk, like the railroad industry, the evidence is overwhelmingly against anthracite wages.

4. Anthracite Wages and the Labor Market

The figures show that anthracite wages differ little from wages in other industries that are operated under similar conditions. If there is any difference, it is against the anthracite mine worker. This same point might have been argued deductively in view of the fact that in the United States, as in any other open labor market, wages are fixed by the laws affecting the entire labor world, and not specifically for any industry.

The prospective anthracite miner must choose between working in an anthracite or in a bituminous mine; between working as a contract miner or as a track layer; between working in the mines and working in a grocery store; between working in a mine and handling baggage for a local express company. The same grade of work, all other things being equal, will pay about the same rate of return in any one of a group of neighboring industries. The common laborer in

a certain district is paid \$1.50 per day whether he spikes down rails for the railroad or shovels gravel for the local contractor. In many cases, the existence of unions fixes the rate of wages. In any case, the laws of the labor market or the rules of the unions make a rate for labor, not for the particular industry in which the person is employed, but for the kind of work he is doing.

This being true, no one is surprised to find that the anthracite miner is paid a wage approximately the same as the wages of other men doing similar work. Indeed, when the comparison is made between the railroad industry and the anthracite coal industry, one fact must be borne in mind, that among the best established and most conservative trade unions in the United States, are the railway brotherhoods. Years of hostility and of aggressive diplomacy have finally placed these unions in a position where they can make and enforce effective demands against the employing railroads. There is probably no group of industries in the country where the unionization is more complete or more effective. The result is the high wages already noted, and it is to be assumed that if the anthracite miners had an equally effective union, they would secure equally high wages, provided they could win as much public attention and public sympathy as the railroad brotherhoods have won.

The anthracite coal operator does not ask himself, "How much will I be able to pay John Strzynski?" Instead he asks, "For how much

will John enter my employment?" The rate of wages that John will demand in the anthracite industry is fixed very largely by the rate of wages in the general labor market.

Fact and logic alike lead to the conclusion that the anthracite miner enjoys no particular economic advantage because he is an anthracite miner. The fact that he is employed on a wonderfully rich natural resource yields him no additional income. He receives no share at all in the prosperity which goes with natural resource monopoly.

5. The Adequacy of Anthracite Wages

Turn for a moment from the comparison of anthracite with other wages, and ask a different question. Are the wages of anthracite miners adequate?

This question bears no relation to other industries. It confines the issue to the anthracite industry alone. When the anthracite miners present demands to the operators for increased wages, they may base their contention on one of three propositions. First, they may argue that their wages are lower than the wages of other men doing similar work. Second, they may argue that they are not receiving a fair share of the product which they are instrumental in creating. Third, they may argue that their wages are inadequate. The first two reasons have already been disposed of. The third one is now up for discussion.

The adequacy of a particular wage,¹ like any other scientific question, must be discussed in a spirit of honest truth-seeking. On all sides the problem of wage adequacy is leading to endless and often to bitter controversy between employers and wage-earners, who usually base their contention that wages are too high or too low upon tradition or prejudice rather than upon facts. The result is dissension and misunderstanding. The problem of wage adequacy should be approached scientifically. First, the scientist examines the wage facts; second, he decides upon some standard by which wage adequacy may be measured; and third, he compares the prevailing rate of wages with that standard in order to determine the adequacy of wages.

There are three propositions which are fundamental in any consideration of wages:

1. Industry must pay a wage sufficient to maintain the efficiency of its workers.
2. Society must oppose any wage that leads to poverty, hardship or social dependence.
3. Wages must be sufficient to enable the worker and his family to live like self-respecting members of the community.

These statements are generally accepted. It seems evident that unless industry pays wages

¹ This argument appeared originally in the "Annals of the American Academy," May, 1915.

that will maintain efficiency, its labor force must necessarily deteriorate. It seems equally evident that unless society insists on a wage sufficient to prevent poverty, hardship and inefficiency, the family, the school, the state and every other social institution will suffer. At the same time, if progress is to be made, wages must be sufficient to provide for self-respect, while they stimulate men to activity. So long as the present social system prevails the man's wage must be a family wage. The home is looked upon as the basic social institution. Each man is expected to make a home and, having made it, to earn a living that will permit the wife to devote her time and energy to the care of the home and of the children. The mother's duty calls her to preside over the home. The father's duty calls him to secure a wage sufficient to keep his family on a basis of physical health and social decency.

The average family as shown by the census figures contains somewhat less than five people. If, however, there is eliminated from the census figures the families consisting of one person and of two persons—that is, families in which there are no children—the average family will consist of nearly six persons. Among the foreigners, who make up the bulk of the anthracite workers,¹ the families are considerably larger than among the Americans.

Some unit of family size must be adopted in

¹ The Secretary of Internal Affairs for Pennsylvania, in his Annual Report, Part III, 1912, p. 322, gives 53,441 American and 86,997 foreign anthracite mine workers.

any discussion of the family adequacy of wages. The family most frequently used in recent social studies consists of a man, wife and three children under fourteen years of age. Such a family corresponds in size with the average American family. The children are too young to work for wages and the mother should be in the home taking care of the children, not working outside. The situation in the anthracite field would seem to call for a somewhat larger standard family than that of three children. For the purpose of the present study, four children will be regarded as the normal or type family for the anthracite regions.

6. The Anthracite Wage Scale

A discussion of wage adequacy begins necessarily with an analysis of wages. What is the anthracite wage?

The figures available showing the wages actually paid in the anthracite regions are meager in the extreme. There is, first of all, the statement of average yearly earnings and average daily wages, published by the Secretary of Internal Affairs (1912, Part III, page 322). These wage figures, upon which comment has already been made, are unsatisfactory because they appear in the form of averages. They show briefly that during the year 1912, when there were 206 working days, the average yearly earnings of the contract miners were \$729; of miners' laborers, \$496; of inside workers, \$541; outside workers, \$527.

The only really satisfactory figures on wages in the anthracite region appear in the report of the Anthracite Strike Commission, and relate to the year 1901. During that year the average annual earnings of contract miners "ranged between \$550 and \$600. Perhaps it would be safe to put the average at \$560" (p. 50). A typical scale of annual earnings for 1901 was furnished by the Lehigh Valley Coal Company and published in the Report of the Commission (p. 178).

TABLE VII.—ANNUAL EARNINGS OF CONTRACT MINERS WORKING THROUGHOUT THE YEAR OF 1901, AND AVERAGE DAYS ON WHICH MINERS WORKED, CLASSIFIED BY ANNUAL EARNINGS, FOR THE LEHIGH VALLEY COAL COMPANY.¹

<i>Classified Annual Earnings</i>	<i>Miners</i>	<i>Average Days on which Miners Worked</i>	<i>Per Cent of Total Miners Reported</i>
\$1,000 or over.....	10	254	1.1
\$900 or under \$1,000.....	10	252	1.1
\$800 or under \$900.....	33	258	3.6
\$700 or under \$800.....	93	250	10.1
\$600 or under \$700.....	204	249	22.1
\$500 or under \$600.....	295	238	31.9
\$400 or under \$500.....	176	221	19.1
\$300 or under \$400.....	76	206	8.2
\$200 or under \$300.....	16	185	1.7
Under \$200.....	10	159	1.1
Average.....	923	236	100.0

¹ This report includes only such miners as worked in their respective collieries throughout the year, and whose names appeared, for some days, at least, on pay rolls of each month in the year.

Tables published on subsequent pages of the report for the Lehigh and Wilkes-Barre Coal Company, the Philadelphia and Reading Coal and Iron Company, the Delaware, Lackawanna and Western Railroad Company and other coal companies, show approximately the same facts.

A study of this table shows that one-third of all the miners receive between \$500 and \$600, while one-fifth receive between \$600 and \$700 and another fifth between \$400 and \$500. Approximately three-quarters of these miners were earning annually between \$400 and \$700.

A considerable modification must be made in these figures in order to allow for the wage changes which have occurred since they were compiled. The average number of days worked per year, during the last few years is higher than the figures shown in this statement by five or six days, although in 1913 the mines worked 257 days. The earnings also have increased. The wages of the miners were raised 10 per cent in 1902, and again 10 per cent in 1912, so that the wage figures given in this table would have to be increased by a slight margin to allow for an increase in the number of working days and by about 21 per cent to allow for the increase in wage rates.

This difference is shown by the difference in average earnings. The Commission found the earnings of contract miners to be somewhere between \$500 and \$600. At the present time the average earnings of contract miners are in

the neighborhood of \$700. This would represent an increase of some 20 per cent since 1901.

The contract miners constitute only a fraction (about one-quarter) of the total number of anthracite workers. The average annual earnings of the other workers in the mines appear to be from \$150 to \$200 less than the average annual earnings of the contract miners. Unfortunately, the Commission published no figures showing classified earnings among other than contract miners. If these facts were available, it would add greatly to the clarity of the issue.

Are these wages adequate? Do the amounts paid by the anthracite industry to its employees enable them to support a family decently? Three phases of the matter will be considered:

1. The adequacy of wages to provide health and decency for a man, wife and four children under fourteen years of age.
2. The adequacy of wages in terms of the business accounting and business practice employed by the anthracite companies.
3. The adequacy to meet current social obligations and social standards.

7. The Anthracite Wage and Physical Efficiency

The adequacy of wages may be tested in terms of the health and decency which are involved in the maintenance of physical efficiency. If in-

dustry is to support its workers, if society is to see to it that families are not forced to depend upon the community, wages must be sufficient in amount to enable the wage-earners to buy health and decency. At the present time the wages paid to a considerable portion of the anthracite workers are insufficient to permit decent family living.

A number of attempts to ascertain the cost of a decent standard of living have been based on the assumption that physical health, education up to the age of fourteen and the other minimum requirements of modern American life were included in the term "decency."

There is a certain minimum of food, clothing, shelter and the other necessities of life below which physical health and social decency are impossible. That minimum exists in terms of bread and butter, shoes, overcoats, medical attendance and school books. It is fixed by the demands of nature and by the standards of society, wholly independent of cost or price; therefore, any discussion of the cost of a decent living begins with an analysis of the various items which comprise living decency. The amount of food required by the man or by his family can be fixed with scientific accuracy. The amount of clothing is not susceptible of such an accurate statement, but it can be designated in terms of a certain number of garments per year. Most students of the standard of living have agreed that three or four rooms are necessary to

house a family of five people decently. They have, likewise, made an allowance for medical attendance, for saving, for insurance and for recreation.

The ordinary family with an income of less than \$1,000 a year devotes about two-fifths of its expenditures to food. The food question may be handled with comparative ease, because modern science has given a fairly satisfactory basis for computing the food necessities of an individual or of a family.

The ordinary man, doing moderate physical work, requires approximately 3,500 heat units of energy per day. Unless they are supplied in his food, he must ultimately become devitalized through lack of proper nourishment. A question might well be raised as to whether the work of the man in or about the anthracite mine is not of a character to require an increased quota of energy units. Some of the occupations are, of course, much more strenuous than others. On the whole, the probabilities seem to be rather in favor of a somewhat higher ratio than 3,500. However this may be, 3,500 calories will be accepted for the time being as a standard.

An adult man requires 3,500 units of energy; an adult woman requires eight-tenths as much. For the convenience of discussion, a family upon which this study will be based includes a boy of twelve, a girl of ten, a girl of seven, and a boy of five. These children require respectively, seven-tenths, six-tenths, five-tenths, and four-

tenths as much as an adult man. The family taken together would, therefore, represent a consuming power equal to that of four adult men.¹

A number of standard of living studies have placed varying estimates upon the cost of 3,500 heat units per day. The Federal Government dietitians in 1907 agreed that physical efficiency could not be maintained by families spending at the rate of 22 cents per man per day. Since 1907 there has been an increase of 23 per cent in food prices, which would increase the minimum limit to 27 cents. This is the minimum established by the New York Association for Improving Conditions of the Poor, and by the New York State Factory Investigating Committee. The Bureau of Standards of New York City, after reviewing these and other facts, accepts a standard of \$7.304 per week (27 cents per day, for their family was \$7 per week).²

These figures refer to food prices in New York, where, according to the British Board of Trade Report and to other evidence, a poor man can buy his food more cheaply than in the outlying districts. An examination of the price schedules issued by the Bureau of Labor suggests that prices in the anthracite regions differ little if any from those in other parts of the Middle

¹ For fuller details regarding the methods of estimating the dietary, see "Financing the Wage-earner's Family," Scott Nearing, New York, B. W. Huebsch, 1913, Chapter 2, Section 7.

² Report on the Cost of Living for an Unskilled Laborer's Family in New York City, 1915, p. 13.

Atlantic States. They are, therefore, probably at least as high as those for New York.

The Federal study made in New England and the Southern States during 1908-09 fixed the cost of food per man per day at 26 cents for New England and 24 cents for the Southern States. From 1909 to 1914 the prices of food, rated according to the average consumption in workingmen's families for the North Atlantic States, increased by one-fifth. If the estimates made in the Federal study were correct, the food cost in 1914 would be approximately 30 cents per man per day.

There has been a considerable, and it would seem a legitimate, question concerning the adequacy of the Chapin diet. The diet adopted in the Federal study certainly seems more reasonable.¹ It would be conservative, therefore, to accept 28 cents per man per day as a basis for estimating the food needs of a family in the anthracite regions. The food requirements of the family of four for a day would therefore be:

Father	=	1.0 × 28c.	=	.28
Mother	=	0.8 × 28c.	=	.224
Boy of 12	=	0.7 × 28c.	=	.196
Girl of 10	=	0.6 × 28c.	=	.168
Girl of 7	=	0.5 × 28c.	=	.14
Boy of 5	=	0.4 × 28c.	=	.112

\$1.12

This equals \$7.84 per week, or \$408 per year.

¹ "Financing the Wage-earner's Family," Scott Nearing, *op. cit.*, Chapter 2, Section 8.

If recent dietary studies are correct, \$408 per year should buy enough food to keep the anthracite mine worker, his wife and four children in physical health.

A comparison may be made at this point between this food estimate and the estimates submitted to the Anthracite Coal Strike Commission in 1902. The Report states (p. 199): the "average quantity of principal articles of food consumed per family" in the anthracite region for 1902, was \$275.14. Between 1902 and 1914, the cost of the principal articles of food, according to the United States Bureau of Labor, increased about 39 per cent. Thirty-nine per cent added to the Strike Commission estimate would give a total of \$382.44. This estimate, however, is for the "principal articles" of food, and includes families of all sizes. Such a statement would leave open the probability that incidental articles of food added to the cost of the "principal articles" would bring the food cost for a family of six very near the estimate here set down, \$408.

The second largest item in the family budget is the rent cost. Students of the standard of living have assumed that a family of six should have not less than four ordinary rooms in order to maintain health and decency. A four-room house in the smaller towns of the anthracite region costs about \$80 a year. In the larger towns and cities the cost is about \$130 per year.

The next considerable item in the budget is

clothing, and on this item there is a wide diversity of opinion. Chapin, in his New York study, allowed \$33 per year for the man's clothing; \$23 for the woman's clothing; \$15 for clothing each girl and \$12 for clothing each boy. There was an additional allowance for soap and laundry utensils. On such a basis the family which we are considering would spend \$110 for clothing. The New York Bureau of Standards (1915) places the clothing item at the same figure as Dr. Chapin. The Federal study adds about one-third to the Chapin estimate. If the Chapin estimate is accepted, it is a bare minimum.

The additional items of expenditure which are ordinarily met, appear in the following list, with amounts set after them equal to the amounts prescribed in the Federal study for a cotton mill town in Massachusetts.

Fuel and light.....	\$24.00
Doctor and medicine.....	13.98
Insurance.....	20.80
Amusement.....	15.60
Church.....	10.40
Newspapers, etc.....	8.84
Incidentals.....	26.00
<hr/>	
Total.....	\$119.62

These amounts, it should be noted, are for the most part lower than the allowances made for like objects by the New York Bureau of Standards. Carfare is omitted. It is a necessary part of the budget in many cases.

Summing up, the costs of physical health and decency for a family of six in the anthracite region would be:

Food.....	\$408
Rent.....	80
Clothing.....	110
Additional items.....	120
<hr/>	
Total.....	\$718

The rent item here used is for villages. In the cities \$50 must be added for rent, bringing the cost to \$768. This sum—\$768—the cost of decent living for a family of six persons in an anthracite city—is an estimate. Accurate information cannot be obtained until a first-hand investigation is made in the anthracite regions. The point that should be enforced is not the \$768, but the fact that there is some minimum of subsistence below which health and decency are impossible. An investigation may show that \$768 is too high—then the amount must be lowered; or that \$768 is too low—then the amount must be increased. There is a minimum cost of living decency in the anthracite regions. At the earliest possible moment it should be determined by a careful investigation. Until that minimum is ascertained there can be no final adjustment of wages that will be either tolerable or equitable.

Meanwhile the \$768 estimate for the anthracite regions may be compared with the standard of living studies made in recent years. In New York City, for example, Chapin estimates the cost of

decency at from \$800 to \$900 for a family of five persons. In Fall River, Mass., the Federal study makes an estimate of about \$750; for Buffalo the estimate is \$850; for Chicago it is \$800.¹ The most recent estimate, made after a careful study by the New York Bureau of Standards, sets the cost in New York City at \$840.

The Fall River estimate (\$750) is perhaps most comparable with the situation in the anthracite fields. The population of Fall River in 1910 was 119,295; the population of Scranton in the same year was 129,867; and of Wilkes-Barre 67,105; of McKeesport 42,692; of Shenandoah 25,774. Thus two of the large anthracite towns correspond somewhat in population with Fall River. The food costs in the anthracite region, as shown by the reports on retail prices, published by the United States Bureau of Labor, do not differ materially from other sections in the eastern part of the United States. The rent cost for Fall River was about the same as that for the cities of the coal regions (\$130 per year). Other items of expense, such as clothing, fuel and light, health, insurance, etc., do not differ in the two places. It would seem, therefore, that with the exception of the clothing item, which was estimated at a rather high figure in Fall River (\$136.80), there should be a fairly accurate correspondence between the requirements of a family in the two places. The fact should be borne in mind that the Fall River study was based on a family of five, and

¹ "Financing the Wage-earners' Family," Scott Nearing, *op. cit.*, Chapter 3.

this study is assuming a family of six. The fact should be further emphasized that all of the studies, with the exception of that of the Bureau of Standards, were made from four to six years ago. During that time the cost of living has increased considerably.

How does this figure (\$718 for villages and \$768 for cities) compare with the wages paid to anthracite workers? In so far as averages are an index of wages, many of the contract miners receive a wage of \$800 or more. The laborers, inside and outside workers, with average daily wages of \$2 to \$2.50, would be able to earn \$750 a year only by working a full year of 306 days. The largest number of days worked by the anthracite miners in recent years was 257 days, and that was well above the average of the five-year period.

Many contract miners are apparently in receipt of annual earnings that will provide living decency for a family of four young children. The great bulk of anthracite workers, however, seem to be in receipt of wages that will not buy such living decency.

There are many ways in which the miner may maintain conditions of living decency. He may refrain from marrying or from having children; his wife may take boarders; when his children grow older they may contribute to the family income; his wife may work at some regular occupation; he may find extra work outside of mining towns; or he may supplement the family income with a cow, pigs, chickens or a truck patch. All

these are possibilities. Nevertheless, the obligation remains upon industry to pay a living wage to its workers, and the bald fact of a wage scale largely below the cost of decent family living stares every man with young children square in the face.

From the standpoint of social well-being, every man in the anthracite region who is receiving a wage that is insufficient to buy physical health and decency for his family of young children is inadequately paid. How many such men are there? Future investigations alone will show.

8. The Anthracite Wage as a Business Proposition

The wages paid by the anthracite industry to a great body of its workers are inadequate to provide health, efficiency and decency for a moderate-sized family. They are even more inadequate when they are considered from the standpoint of up-to-date business practice.

Many a successful business man, who is confident that "the workers are paid all that they are worth," and that "wages are far too high, anyway," has never stopped to analyze wages from a strictly business point of view. The wage-earner is, in reality, a business man. His place of business is his home. The object of his business activity is the rearing of a family in good health and with a generous supply of education. To this end, the worker labors during most of his adult life.

Business men have worked ardently to safe-

guard business interests. They have talked a great deal about the importance of business stability; of conservatism in finance; of the returns due a man who risks his wealth in a business venture; and of the fundamental necessity of maintaining business on a sound basis. After centuries of experiment they have evolved what they regard as a safe and sane method of financial business procedure. Every successful business man tries to live up to the following well-established formula:

First. He pays out of his total returns, or gross receipts, the ordinary costs of doing business—materials, labor, repairs and the like. These payments are known as running expenses or up-keep.

Second. After up-keep charges are paid he takes the remainder, called gross income, and pays out of it the fixed charges—taxes, insurance, interest and depreciation.¹

Third. The business man, having paid all of the necessary expenses of doing business (the running expenses and the fixed charges), has left a fund (net income) which, roughly speaking, is the profits of the business. Out of this net income,

¹ A depreciation charge is one that is made against the wearing out of capital. A paper manufacturer buys a machine for which he pays \$1,000. Experience tells him that this machine will wear out in ten years. Therefore the manufacturer sets aside each year a sum which at the end of ten years will equal \$1,000 (a new machine). In this way the business man keeps his capital intact. While the individual machines, tools and the like do wear out, the accounts of the business are so kept that these pieces of capital will be automatically replaced when they are too old for use. The depreciation charge is recognized everywhere as a legitimate and necessary fixed charge on business.

dividends are paid, improvements and extensions of the plant are provided for.

Fourth. The careful business man increases the stability of his business by adding something to his surplus or undivided profits.

This formula may be stated in terms of anthracite bookkeeping. Very few of the coal mining companies make any satisfactory public statement of accounts. Here is one that will illustrate the principle involved.¹

TABLE VIII.—STATEMENT OF OPERATIONS OF THE LEHIGH AND WILKES-BARRE COAL COMPANY, 1912.

Gross earnings.....	\$18,742,623
Total expenses ²	14,982,263
<hr/>	
Net income.....	\$3,760,361
Deductions	
Interest.....	\$814,390
Sinking Fund.....	460,000
<hr/>	
	\$1,274,390
<hr/>	
Surplus for the year.....	\$2,485,971
Dividends.....	1,197,625
<hr/>	
Total surplus, June 30, 1912.....	\$3,683,596

The expenses of doing business were \$3,750,000 less than the receipts. Even after interest, dividends and \$500,000 for a sinking fund had been paid out, more than \$1,000,000 remained. This

¹ "Poor's Manual of Industrials," 1913, p. 706.

² Includes colliery improvements, \$261,181; royalties, \$341,089; taxes, \$719,469; and "value of coal sold from stock, \$1,469,365."

sum, added to the surplus accumulated from previous years, left the company, at the end of the year, with over \$3,500,000 of "surplus."

The profits in the anthracite business go very largely to the railroad interests, and since the railroad accounts are clearer than those of the coal companies, a statement of anthracite railroad accounting will serve as a further illustration of the methods of sound business practice accepted by the anthracite owners. The operating statistics of the Delaware, Lackawanna and Western Railroad for 1912 are reported in Poor's Manual of Railroads, 1914, p. 193.

TABLE IX.—OPERATING STATISTICS OF THE DELAWARE,
LACKAWANNA AND WESTERN RAILROAD, 1912.

Gross earnings.....	\$37,564,511
Total expenses.....	24,146,423
<hr/>	
Net earnings.....	13,418,088
Other income.....	6,054,567
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Gross income.....	\$19,472,655
Deductions:	
Taxes.....	\$1,771,980
Rentals.....	5,847,278
Interest on bonds.....	6,486
Renewals and betterments.....	1,720,698
Miscellaneous.....	84,242
Dividends.....	6,028,800
<hr/>	
Total deductions.....	\$15,459,484
Surplus for the year.....	4,013,171
Total per cent earned on stock...	33.17

The bookkeepers of the Lackawanna begin with the total returns or gross earnings of \$37,000,000. From these they deduct the expenses of carrying on the business. To the net earnings which remain they add incidental income from dividends, rentals, other properties, etc. The total is gross income. Observe that in the operations of this road, a third of the gross earnings appears as net earnings, and the gross income of the road is equal to half the gross earnings. From gross income is deducted taxes, rentals and interest. These are the fixed charges, obligations which must be met if the business is to continue. From gross income the bookkeepers also deducted \$1,750,000 for renewing and improving the property of the road, as well as \$6,000,000 for dividends. After all of the necessary deductions had been made, \$4,000,000 (an amount equal to 11 per cent of the gross earnings) remained as surplus, which the road lays aside for a rainy day or a special dividend, as circumstances may dictate.

Like every carefully handled business, the Lackawanna—

1. Paid its running expenses.
2. Paid its fixed obligations.
3. Divided up its profits.
4. And kept a nest egg.

The year 1912 is not an exceptional year in the history of the Lackawanna. From 1905 to 1912 the per cent earned on the stock varied from 22 per cent in 1906 to 53 per cent in 1909. The amount paid in dividends was \$1,838,000 in 1898.

It remained at this figure until 1903. From 1904 to 1908 the dividend payments were about \$5,000,000 per year. In 1909 the dividend rate was 85 per cent, including a special dividend of 75 per cent. The total dividends paid that year were \$22,861,586. In 1910, \$6,000,000 in dividends was paid, and in 1911, \$16,399,200.

The showing made by the Lackawanna is in one sense exceptional, because of the high dividends paid by that road. On the other hand, the method of carrying on business is typical of the method pursued by every sound business organization in the United States. Here, for example, are the operating statistics of the Lehigh Valley Railroad, another anthracite carrier.

TABLE X.—OPERATING STATISTICS OF THE LEHIGH VALLEY RAILROAD FOR 1913.¹

Gross earnings.....	\$43,043,372
Operating expenses.....	29,107,820
<hr/>	
Net earnings.....	13,935,552
Other income.....	2,023,545
<hr/>	
Gross income.....	\$15,959,097
Deductions:	
Taxes, rentals, interest on bonds, miscellaneous.....	\$7,197,268
Dividends.....	6,060,800
Adjustments.....	1,079,500
<hr/>	
Total deductions.....	\$14,337,568
Surplus for the year.....	\$1,621,529
Total surplus, July 1.....	\$25,066,231

¹ "Poor's Manual," 1914, p. 263.

The dividend rate and total dividend payments of the Lehigh Valley are lower than those for the Lackawanna. Nevertheless, the same general principles hold good. Expenses are paid out to total earnings. The balance must be sufficient to meet the necessary fixed charges, to pay dividends and to leave an adequate surplus. In the case of the Lehigh Valley, this surplus has mounted up to \$25,000,000.

Every modern business man disposes of the total receipts of his business in some such way as that indicated. The business man who cannot pay his running expenses, fixed charges and dividends, and show some surplus, is scanned critically. Should he fail to pay dividends, he is considered unprosperous. If he does not meet the interest on his bonds, he is taken into court and declared a bankrupt. Running expenses, fixed charges, dividends and surplus are not merely fair; they are essential to business success. They are considered a "right" by the organizers of every legitimate business.

Suppose the anthracite worker, who is striving to support a family on a wage ranging from \$2.50 to \$3.50 a working day (\$500 to \$900 per year), should apply to the financing of his family affairs the financial formula adopted by any well-managed modern business. Since he must allow for running expenses, fixed charges, dividends and surplus, he would proceed as follows:

First. He would pay, from the total family

income, the family running expenses—food, clothing, housing, medicine and the like.

Second. From the remainder, his gross income, he would take interest on the investment which has been made in bringing up and educating his wife and himself; insurance against all reasonable contingencies, such as sickness, accident, death and unemployment; and a sum for depreciation sufficient to compensate for the inevitable decrease in his earning power and for the old age during which he and his wife can no longer earn anything.

Third. The remaining net income should be sufficient to enable the worker to pay himself dividends proportionate to the excessive risks which he runs in bringing a family into the world and attempting to rear it; and sufficient to add at least something to the surplus which the family lays aside to provide against such untoward events as births, deaths and prolonged sickness.

The workman who conducted his affairs on this basis would be a sound, sane, safe financier. He would also be a seven-day wonder. If the preceding section established any point, it was that a large percentage of wage-earners receive a wage which will not pay even decent running expenses. Any business man who attempted to conduct a business on a basis that would pay only the flimsiest of up-keep charges would be regarded as a subject for mental treatment, yet the bulk of anthracite workers find themselves in exactly that predicament. They are conducting a family

business on a basis that will not pay reasonable running expenses. The legitimate fixed charges of business—interest on the investment, adequate insurance and depreciation—are far above the reach of most wage-workers who have a family of six to support. The ordinary worker's family is a bankrupt concern—it cannot even meet the interest on its bonds. And dividends? The ordinary worker is thankful if he can pay the bill incident to up-keep. Dividends are a luxury of which he does not dream.

Place before any level-headed man of affairs this proposition: "I have a business which is barely able to pay running expenses. We can't meet our fixed charges, and our wildest flights of imagination have never carried us as far as dividends and surplus. Will you join in the venture?" The statement is grotesque, yet it sets forth the financial position of a great body of anthracite wage-earners.

One further point should be noted. After the business man has paid running expenses and fixed charges, the remainder is income—"net income." The great mass of wage-earners who never receive enough to pay more than their bare running expenses have no "income" in the real sense of that word. They are getting mere up-keep or subsistence.

As a business proposition, for a family of six, the ordinary anthracite wage is absurdly inadequate. No business man would consider it. It violates every business standard which the prac-

tice of the modern man of affairs recognizes as legitimate. Every concept of modern business management cries "shame" at the very thought of the business proposition which the anthracite wage-scale presents to tens of thousands of its workers.

9. The Anti-Social Nature of the Anthracite Wage

The health inadequacy and the business inadequacy of the anthracite wage can be demonstrated statistically. The proof of the social inadequacy of wages rests upon more general considerations.

Society must develop a system of compensation which will stimulate industry and thrift among the people who do its work. A wage system or any other system of distributing the products of industry must be based on an adequate appreciation of this fundamental principle.

The first, and probably the most fundamental, social objection which may be raised against the present wage scale is that it fails very largely to stimulate the ambition of the worker. There are two reasons for this failure. On the one hand, the wage scale is so utterly rigid that the man doing good work is placed on the same footing with the man doing poor work; the enthusiastic worker is placed on the same basis with the indifferent worker. This holds true of piece-rate payment as well as of time-rate payment. The rule of most producing establishments is "anything that will pass the inspector." Furthermore,

the individual may work as hard as he pleases, devoting all of his energy to the work in hand; despite this, he is unable to raise his wage rate and very frequently is unable to increase his wages. At the same time, industry is organized on such a large scale basis that the number of positions "at the top" is strictly limited. Among the employees of the American railways, for example, one in one hundred is an officer. The proportion is higher for manufacturing industries, although it is seldom that more than 10 per cent of the men employed in an established industry hold positions which involve even a moderate amount of responsibility and initiative.

The wage scale is fixed either by agreement between the employer and the union, or by custom and common consent. No one even pretends that there is a definite relation between the values produced by the worker and the wage which he secures.

The worker is not paid in proportion to his product. Wages are never fixed on that basis, with this single exception—that no employer can afford to pay any more in wages than a group of men are producing in product. The law of monopoly, "all that the traffic will bear," is the law which fixes the anthracite wage. An employer has a Scotchman working for him at \$3 a day. An equally efficient Lithuanian offers to do the same work for \$2. The employer is not in business for his health, and the work is given to the lowest bidder.

An employer never determines a wage by asking the question: "How much does this man produce?" Rather he asks, "What will it cost me to get another equally efficient person in his place?" It is the cost of replacement and not the values created in production which determines the wage that a man receives.

The phrase, "He gets all that he is worth," means merely this—that the employer is paying him as much as he has to pay another equally efficient person to do the same thing. Whether he is hiring bricklayers, bookkeepers or coal-heavers, the wage that he pays depends upon the supply and demand of labor. This law is excellently illustrated during a time of financial and industrial depression, when there is a surplus of labor and a dearth of opportunity for employment. Many industries at once reduce their wages because they are able to get all of the people that they want at a lower figure.

The wage contract, as it is called, knows no social morality and is based on no standard of social ethics. It is subject only to the law of supply and demand, and to the law of monopoly price. The employer pays his labor as little as he can. The worker demands and gets as much as he can. Until recently there has been no general idea that a minimum wage was a social necessity. The individual laborer, bargaining with the employer, made the best terms he could. If labor was scarce, he was successful; if it was a drug on

the market, his wages were reduced to a starvation level.

Another consequence follows from the ruthless bargaining of the competitive labor market. The bargain takes place between the employer and a worker, irrespective of social obligations. The consequences are doubly disastrous to the man with the family depending upon him. A common occupation, quarrying, for example, may be carried on by married or by single men. The employer does not even put himself to the trouble of asking whether the prospective employee is married or single, because that makes no difference if a man is handy with his tools. The man with a family is brought into active competition with the man who has no family obligations. The native-born head of a household must accept labor terms which are satisfactory to the foreign-born single man. Industry does not inquire into a worker's social obligations. It simply asks whether he is able to do the work, and at what price. The competition of the labor market does the rest.

Society demands and expects that men shall support families. The future of the state hinges upon the fulfillment of this presupposition. At the same time, the modern economic organization makes no attempt to assist the man who is bringing up a family to face the competition of the man who has no family dependent upon him.

There is no relation between the social (family) needs of a man and the wage which he receives.

Wages are fixed wholly independent of social relations.

The anthracite wage is anti-social. The present system of wage payment fails to stimulate workers to industry and thrift because it has not given them a reward in proportion to their exertions and ability. There is no relation between product and wages. Rather wages are fixed by competition and monopoly. The present wage scale fails completely to provide a return in proportion to social needs. The simplest requirements of social progress call for ambition, for justice, and for the provision of health necessities. The present anthracite wage scale offends even these primitive social standards.

10. The Anthracite Wage and the Increased Cost of Living

The wage of many anthracite workers, when measured in terms of physical, economic or social adequacy, is meager. The wages paid to a great body of the anthracite mine workers are not sufficient to maintain physical, economic and social efficiency. Another phase of the matter remains to be considered—the relation between the increase in anthracite wages and the increase in the cost of living.

Granted some will insist that the wages of the miners are not entirely adequate to provide for the demands of efficiency, it is still true that the miners have been constantly bettering their position.

The past few years have witnessed several bitter labor struggles in the anthracite region. The workers have maintained a powerful trade union at great cost. During the labor disturbances, the workers have sacrificed, the wage loss has been enormous, property has been destroyed, and the social and political organization has broken down. What is the outcome?

Three periods must be considered. First, there is the period 1890 to 1914; second, the period 1903 to 1914; and third, the period 1911 to 1914. The cost of living facts that are available date from 1890. The great labor struggle of 1902 marks an epoch in the struggle of the anthracite worker for better conditions of life; and the readjustment in 1912 gives a brief period of contrast with the situation at the present time.

The ordinary worker's family spends at least two-fifths of its money for food, one-fifth for rent; one-sixth for clothing; and the remainder for miscellaneous things like insurance, saving, recreation, education, health.

The United States Bureau of Labor has been collecting figures on food costs since 1890. During those years, in the North Atlantic States, the cost of food rose 60 per cent. From 1903 to 1914 the cost of food rose 40 per cent. From 1911 to 1914 the cost of food rose 17.2 per cent.

Rent costs are difficult to secure. No one has made any study of rent costs; hence there are no figures available. Isolated instances indicate that there has been a considerable increase in rent

during the past twenty years. Just how great that increase has been no one is in a position to say.

The most complete clothing figures are published in the wholesale price bulletins of the United States Bureau of Labor. Between 1890 and 1913 the wholesale prices of clothing rose about one-fifth. Between 1903 and 1914 the prices rose about one-third.

If the figures were available it would be profitable at this point to work out the increase in the total cost of living, weighted, or apportioned according to the amount of money spent for each item. The figures, unfortunately, are not to be had.

There is another very important consideration that is frequently overlooked in discussions of the cost of living. "Living" means doing the things that are done in the group to which one belongs. The cost of living means the cost of keeping up with the social standard.

During the past twenty-five years there has been an immense increase in the standard of life. Many new lines of expenditures have been introduced, as, for example, the cost of health, of recreation and of education. Doctors, dentists, moving pictures, compulsory education laws, newspapers, magazines and the like have all been added to the list of things that the ordinary American considers necessary to his welfare. Twenty-five years have made these numerous additions to the standard of living. Those who live in American communities must keep up with the times.

It is no argument to say that a great body of the anthracite workers are foreigners. One of the chief aims of American social organization is to "Americanize" the foreigner. If that means anything it means getting the foreigners to adopt the American standard of living.

Twenty-five years have witnessed a considerable increase in the price of the articles necessary to maintain life. They have also witnessed a rapid rise in the standard of life. Has the increase in anthracite wages been sufficient to offset this increased cost of living?

Following the labor disturbances in the late eighties, there was a period of a dozen years during which the workers bargained individually with their employers and took what they could get.

During the period immediately preceding the break-up of the union, the miners had worked out a rather high standard of co-operation. The union paid sick and death benefits and benefits to widows and orphans. There was a miners' newspaper, which encouraged unity of action. There were co-operation stores, and through the efforts of the union, the first mine inspection law was passed. Another law was enacted which compelled the weighing of coal.¹

The union was broken up through the persistent efforts of the operators. "With the surrender of the men, they were compelled, as a condition of obtaining work, to sign away the right of having their coal weighed. The sliding

¹ "Conciliation and Arbitration," *op. cit.*, p. 214.

scale continued in operation, but the determination of the basis and the prices paid to labor were entirely in the hands of the operators till the strike of 1900."¹ Until 1900, therefore, there was no such thing as a standard wage in the anthracite fields. Hence, no adequate description of the wage conditions during these years can be given. Indeed, it is not until the investigation made by the Anthracite Strike Commission in 1902 that a really adequate statement of the wage problem is made.

State reports do contain some material on wages during this period. These figures, gathered by Mr. Suffern, are as follows:²

TABLE XI.—EARNING AND WORKING TIME OF ANTHRACITE MINES, 1890-1911.

Year	Days Worked	Earnings of Contract Miners	
		Average Daily	Yearly
1890.....	179	\$2.39	\$427.81
1897.....	233	1.79	417.84
1902.....	175	2.83	495.97
1904.....	231	2.96	684.78
1906.....	207	3.09	641.13
1909.....	213	3.06	651.28
1911.....	233	3.19	743.79

The earlier figures are extremely unsatisfactory. The average yearly earnings are secured by multiplying the average daily wage by the number of days worked. There is no indication of the

¹ "Conciliation and Arbitration," *op. cit.*, p. 214.

² *Ibid.*, p. 360-61.

method that was pursued in ascertaining the average daily wage. The figures, from many points of view, are open to grave question.

Taking the figures on their face, they show that the average daily wages of contract miners increased 33 per cent—or almost exactly one-third, between 1890 and 1911. Suffern gives no figure for average daily wages in 1897, but dividing the yearly earnings by the number of days worked, a figure of \$1.79 is secured. If this figure is correct, the rise in average daily wages since 1897 is far greater than it was since 1890.

Turning now to average yearly earnings, the increase has been considerably greater than in average daily wages, because of the higher number of days worked during recent years. Suffern states the number of days worked in 1890 as 179. The United States Geological Survey places it at 200 and makes the average number of days worked in 1890, 1891 and 1892 about 200. Accepting this figure, the average annual earnings in 1890 (at \$2.39 per day) would have been \$478; and the average yearly earnings in 1911 were \$743.79 in a year that reported 233 working days. The increase in average yearly earnings is therefore 55 per cent. Between 1911 and 1914 wages were increased (1912) about 5 per cent. In 1914, however, the number of days worked was only 229. There would, however, be some addition to this 55 per cent.

No further use will be made of these figures, because they are unsatisfactory in the extreme.

It may be noted that the figures for the anthracite industry published by the Bureau of Mines, the United States Geological Survey and the Secretary of Internal Affairs of Pennsylvania do not always correspond. Several instances of this have already been noted. Suffern is not specific regarding the origin of all of his figures, and further analysis seems to promise little result. The figures, on their face, show that between 1890 and 1911, the wage rates of contract miners increased by about 33 per cent, and the annual earnings by about 55 per cent.

The really reliable wage data must be drawn from a period subsequent to the investigations of the Anthracite Strike Commission of 1902. The first complete year since the work of this Commission is 1903.

As a result of an immense expenditure of time and effort, the Commission of 1902 fixed a wage scale which seemed to them equitable. Their conclusions are open to question, but accepting them at their face value, and assuming that the wage which they established was a fair wage, what changes in wages and in the cost of living have occurred since that time?

The Commission established a sliding scale, under which the miners' wage was to be increased with each advance, beyond a certain point, in the wholesale price of anthracite coal. For 1903 this sliding scale award set the wages of the miners at a point 4 per cent above the rate awarded by the Commission. In 1912 the sliding scale was

abolished and a flat increase of 10 per cent for contract miners and of $11\frac{1}{9}$ per cent for inside day workers was substituted. That agreement expires in March, 1916. Until that time the increase in wage rates for anthracite miners over the award of 1902 is practically 10 per cent. In other words, the anthracite workers are receiving a wage rate of 10 per cent more in 1915 than they received in 1903.

There has been a considerable increase in average yearly earnings. The average number of days worked in 1903, 1904 and 1905 was 207. In 1912, 1913 and 1914 the average was 239. Here is an increase of 15 per cent in the working time, making a very substantial increase in the amount earned by the anthracite workers.

The real test of wages is not the number of dollars received, but the amount of food, clothing and shelter they will buy. The facts available before 1903 are too crude to permit of effective calculations, but since 1903 there are figures that will allow of some elaboration.

There are, first, the figures for number of days worked, and second, of food prices. The real wage, resulting from these two sets of figures, will give the purchasing power of anthracite wages in terms of food.

The Anthracite Strike Commission, in that part of its report which deals with the work of contract miners, concludes that the annual earnings of contract miners, "based upon returns for the year 1901, range between \$550 and \$600. Per-

haps it would be safe to put the average at \$560." (P. 50.)

In order to illustrate the type of situation upon which this conclusion was based, the next two paragraphs of the report contain two illustrations, from the Lehigh Valley and the Lehigh and Wilkes-Barre Coal Companies, "whose work seems to have been conducted as regularly and systematically as any in the region." (P. 50.)

"The reports of these two companies included only such miners as worked in their respective collieries throughout the year, and whose names appear, for some days at least, on the payrolls of each month in the year." (P. 50.) The Lehigh Valley figures show annual earnings ranging from \$667 to \$465 and averaging \$568 per year, or \$2.41 per day. The average number of days worked was 236. The figures for the Lehigh and Wilkes-Barre Company show annual earnings ranging from \$686 to \$451. The average annual earnings were \$589 and the average daily earnings \$2.47. The number of days worked was 238. These two sets of figures correspond very closely and lead to the conclusion that in 1901, a year of 236 working days, yielded average annual earnings of about \$575.

With these figures in mind, the Commission decreed that 10 per cent advance be given to all contract miners. In addition to this 10 per cent, the sliding scale provided for 3 or 4 per cent annually.

An attempt will be made, on the basis of the

figures on which the award of 1912 was based, to show what changes occurred in the purchasing power of the miners' wage from 1913 to 1914. The \$575 base, representing 236 working days in 1901, must be increased, for 1903, by 14 per cent increase in wages. At the same time, for the whole anthracite region the number of days worked in 1903 was only 206, or 12.7 per cent less than the basis adopted by the Commission. The earnings figure for 1903 would therefore be \$571.25. Accepting this figure as a base, and calling it 100, the earnings for subsequent years, weighted in proportion to the number of days worked, and to the percentage added to the wages by the changes in the sliding scale, appear in Column two of the following table. In the next column are the figures of the United States Department of Labor, showing the increase in food prices. The last column is the ratio between wages and food prices, or real wages in terms of food.

It must be noted that the price of food has increased faster than the prices of the other things the worker buys, though how much faster no one can say accurately. Expressed only in terms of food prices, the real wages of the contract miners have been decreased during recent years, in spite of the increase in the wage rate and of the number of working days. No statements can be made about the wage of the other anthracite workers, for, despite the fact that they are in a large majority, and that their wages are much lower than the wages reported for the contract

miners, little attention was paid to their wage situation by the Anthracite Strike Commission, and the data regarding them are meager.

TABLE XII.—ESTIMATES OF AVERAGE ANNUAL EARNINGS, PRICE INDEX AND REAL WAGES OF ANTHRACITE MINERS, 1903 TO 1914.

	<i>Estimated Average Annual Earnings of Contract Miners</i>	<i>Price Index, North Atlantic States, Weighted per Con- sumption</i>	<i>Real Wage or Pur- chasing Power</i>
1903.....	100	100	100
1904.....	97	102	95
1905.....	106	101	105
1906.....	95	105	90
1907.....	107	109	98
1908.....	97	111	87
1909.....	100	115	87
1910.....	117	119	99
1911.....	126	119	106
1912.....	118	131	90
1913.....	132	137	96
1914.....	117	140	83

Although there are no satisfactory wage figures for the great body of the anthracite workers, if the position of the contract miners is any indication of that of the other anthracite workers, they have failed, in spite of the immense expenditure of time and effort and money on the organization and upkeep of the union, to get an increase in wages equal to the rising cost of food, and presumably to the cost of living at large.

11. A Fair Anthracite Wage

Each anthracite worker may justly ask for a wage that will buy a decent living for him and for a family of reasonable size. This is the minimum of fair wages.

In addition to the minimum wage, based on the cost of a decent living, the contract miner, the mine laborer and such other men as are subject to unusually great risk, should receive a wage that recognizes the extra hazard of their occupations. In the case of the contract miners, it is evident that this extra compensation for risk should be considerable.

Beyond these considerations, the amount of skill demanded and the disagreeableness of the work should exercise a determining influence in fixing a fair wage.

Assuming that the wage decreed by the Anthracite Strike Commission was a fair wage, all groups of anthracite workers are entitled to a very considerable increase in wages, based on the great increase in the cost of living since 1903. In deciding the extent of this increase, the greater number of days worked each year, during the last few years, should be taken cognizance of.

Should the foregoing statements regarding a fair wage be accepted as substantially sound, the figures cited in this chapter, though obviously incomplete, make it clear that, looked at from any standpoint, the anthracite workers are entitled to a material increase in wages.

CHAPTER 5.

THE PROFITS OF THE OPERATORS

1. The Era of Small Profits

THE anthracite field has always been profitable in two senses: First, the product has a wide market that has been growing steadily from year to year; second, in this, as in any other hidden resource, the owner may, and frequently does, "strike it rich." If the question of profits is faced from either side, anthracite is a profitable business.

During the early years of anthracite production the market was strictly limited by the limited transportation facilities. Coal was a heavy commodity that could be carried only by water. Until the railroads entered the field there could be little general sale for the product. The coming of the railroads with the rapidly widening market which they offered led to an era of speculation in coal lands, and of energetic efforts on the part of the anthracite railroads to secure large coal areas. Under the spur of these speculative and monopoly activities, coal properties were bought at prices on which profits could not possibly be made. During the periods of feverish buying and leasing by railroad interests of anthracite property, agreements were

entered into that were plainly opposed to sound business procedure.

The Reading interests, which were leaders in the later efforts to establish a control in the anthracite fields, went on the rocks in the devastating industrial storm that struck the United States in 1892 and 1893. The Reading had bought in large, undeveloped tracts of coal land; it had assumed onerous business obligations in its efforts to secure control of other railroad interests. It had overstrained its credit at a time when credit was being restricted. Although the Reading properties were of immense potential value, they could not be realized on immediately. The financial crash came and the fate of the Reading interests was temporarily sealed.

The period was one of readjustment. Business was still highly competitive and chaotic. Among business men generally there was manifested little of that feeling of group solidarity which they have since displayed. The industrial world was still a big game, which every man played for himself.

The competitive fever had played havoc with the interests of the anthracite coal owners. Under its spur, agreement after agreement in the anthracite field had been abandoned or dissolved. The producers had a vague understanding of their mutual interests, but it was insufficient in extent to down the competitive impulse.

The sweep of the 1893 panic taught American business men a lesson. Competition, instead of

being the life of trade, was in reality the death of trade, because it was the death of tradesmen. Competition was dangerous in the extreme to all concerned. The successful rival suffered with the vanquished.

The period from 1893 to 1898 was a dismal story of industrial hardship. Times were bad. Orders were light. Collections were poor. Credit was shaken. The whole industrial world paused in its onward rush.

The anthracite business was affected as severely as most others. Prices dropped to impossibly low figures. Men worked their collieries at a loss in order to keep their places in the market. The anthracite railroads cut or passed dividends. Capitalized at high figures, struggling with encumbering fixed charges in the shape of bonded debt, lease obligations and the like, the anthracite operators passed through a period when profits were meager indeed.

These hard times in the anthracite coal field were in part due to the country-wide industrial depression and in part to the hit-or-miss fashion in which the anthracite trade had been conducted. The operators had displayed little regard for one another. They had fought when they should have signed truces. They had engaged in price wars at a time when they might have been reaping monopoly profits.

The lesson of the long industrial depression that ended with the boom year of 1898 was unavoidable. Co-operation paid. "Mutual help-

fulness" was a formula far superior to "every man for himself." If profits were desired in the anthracite field or in any other field, there was only one thing to be done—those interested in the anthracite coal fields must learn the elements of team work.

The result to the American business world of this famous lesson of the nineties was an effective spirit of combination that brought people together. Since that co-operative spirit took possession of the anthracite field the industry has been profitable.

2. *Making Anthracite Profitable*

Since the formation of the anthracite combination in 1898 the anthracite industry has paid. Even in hard years dividends have been regular and surpluses have been laid by with unfailing regularity.

TABLE XIII.—THE AVERAGE WHOLESALE PRICE OF STOVE COAL AT NEW YORK HARBOR, 1890–1904.¹

<i>First Period</i>		<i>Second Period</i>	
1890.....	\$3.71	1898.....	\$3.80
1891.....	3.85	1899.....	3.70
1892.....	4.15	1900.....	3.95
1893.....	4.19	1901.....	4.32
1894.....	3.60	1902.....	4.46
1895.....	3.13	1903.....	4.82
1896.....	3.79	1904.....	4.82
1897.....	4.01		

¹ Bulletin 149, United States Bureau of Labor, p. 135.

The men behind the combination of 1898 saw that the chief thing necessary for the financial prosperity of the anthracite fields was a higher price for anthracite products. Between 1898 and 1903 this higher price became a reality. The movement in the price of stove coal illustrates the point.

The figures in the First Period give an idea of the price movements up to the formation of the combination. The figures show astonishingly sudden changes. The price was at \$4.19 in 1893 and at \$3.13 in 1895. By 1897 the price was up to \$4.01. When the fact is borne in mind that these are wholesale prices in a staple product, some idea can be formed of the instability of the anthracite business during those hard years.

Stove coal prices touched rock bottom in 1895 (\$3.13). The combination of 1898 found prices at the level they had occupied in 1890 (\$3.71), when the Reading interests were attempting to control the field.

The Second Period chronicles the success of the anthracite combination of 1898. Under the impetus of this co-operative venture, prices rose from \$3.80 in 1898 to \$4.82 in 1903. At that figure they continued until 1912, when they went to \$5.06.

The jump in the price of anthracite was sudden, and was not in any sense parallel to the general rise in the cost of living that was taking place at the same time. The United States Bureau of Labor (Bulletin No. 140, page 11) reports an increase in food prices between 1898 and 1903 of

15 per cent. During the same period anthracite prices rose 27 per cent. From 1903 to 1912, while food prices increased 34 per cent, the price of anthracite remained stationary.

The rapid jump in hard coal prices between 1898 and 1903, and the stability of prices after that date, is evidence of the existence of a combination to control price movements. Professor Jones (pp. 160-61) clinches the point by pointing out the manner in which the price increases were brought about.

"The advance in 1902 was made in October, the various companies putting out a uniform schedule of monthly prices for the prepared sizes of coal, averaging about 50 cents higher than the previous prices. The schedule for stove, egg, and chestnut was \$5 per ton at the terminal points nearest the city of New York, and 5 cents less at the terminal points farther away. These uniform advances in the price of coal were put out at the same time, after consultations among the presidents of the railroads or their coal companies, each of whom was aware of the price which the other companies were to charge. President Truesdale of the Lackawanna testified in 1908 that the advance in the circular price of the Lackawanna in 1902 was made by the officers of the coal sales department of the railroad after consultation with him.

"President Thomas, when asked with whom he consulted in the fixing of the price in 1902, replied, 'I do not recollect now. I think probably

I consulted with Mr. Baer; very likely I asked Mr. Truesdale what he was going to do. I know I asked Mr. Walter what he was going to charge for coal.' It is significant that this considerable advance in the price of the prepared sizes of anthracite, made by the presidents after consultation, remained in force until 1912, with the exception of the omission of the April discount in 1906 on account of the suspension of mining operations in April of that year."

The anthracite combination, through concerted action, increased the price of coal between 1898 and 1903 by an amount sufficient to yield handsome returns in the form of earnings, dividends and surpluses. This statement may be substantiated in a number of ways.

Take first a single illustration. "The report of the Lackawanna Railroad for 1903 showed a net profit on the sale of coal of over \$3,000,000. This was 85 per cent greater than its profit in 1901. When asked before the Interstate Commerce Commission whether he attributed 'that gain of 85 per cent in profit very largely to the excess of the new price over the increased cost of mining,' President Truesdale answered, 'That had considerable to do with it, of course.'"¹

Another measure of the effect of the price increase may be seen in the increase of dividends declared by the anthracite carriers.

The production of coal was increasing. In the years from 1895 to 1899 the total produc-

¹ "The Anthracite Coal Combination," *op. cit.*, p. 158.

tion of anthracite varied from 41,637,864 tons (1897) to 47,665,204 (1899). (Mineral Resources, 1913, Part II, p. 889.) In 1897 the mines worked only 150 days; in 1899, 173 days. (Mineral Resources, 1913, Part II, p. 753.) Between 1900 and 1904 the production moved up from 45,000,000 to 57,000,000 tons; the days of operation from 166 to 200. Note how this increase of 27 per cent in production compares with the increase in dividends.

The year 1898 shows dividends as follows:

Central Railroad of New Jersey.....	4 per cent
Lackawanna.....	7 " "
Delaware and Hudson.....	5 " "
Pennsylvania Railroad.....	5 " "
Lehigh Coal and Navigation Company...	4 " "

By 1903 a transformation had occurred. The dividend of the Jersey Central rose from 4 to 8 per cent; the Delaware and Hudson, from 5 to 6 per cent; the Pennsylvania, from 5 to 6 per cent; and the Lehigh Coal and Navigation, from 4 to 6 per cent. The next year, 1904, shows a slight increase in dividends, and in 1905 the dividends declared were as follows:

Reading Company.....	3½ per cent
Central Railroad of New Jersey.....	8 " "
Lehigh Valley.....	4 " "
Lackawanna.....	20 " "
Delaware and Hudson.....	7 " "
Pennsylvania.....	6 " "
Ontario.....	4½ " "
Lehigh Coal and Navigation Company...	8 " "
Philadelphia and Reading.....	20 " "

P R O F I T S

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In 1898 the Reading Company, the Lehigh Valley, and the Ontario had declared no dividends. The dividend situation in 1905 was eminently satisfactory.

The price schedules adopted in 1903 proved profitable, from the standpoint of dividends, up to 1912, when the next price increase occurred. Thus in 1911 the dividend rates were:

Reading Company.....	6	per cent
Central Railroad of New Jersey.....	12	" "
Lehigh Valley.....	10	" "
Lackawanna.....	55 ¹	" "
Delaware and Hudson.....	9	" "
Pennsylvania.....	6	" "
Ontario.....	2	" "
Lehigh Coal and Navigation Company....	8	" "
Philadelphia and Reading.....	15	" "

The story told by the dividend rates is clear and emphatic. The price schedules which the combination of 1898 was able to establish in 1903 proved highly remunerative over a series of years, some of which were prosperous and others unprosperous. During good and bad years alike the dividend payments of the anthracite roads have been eminently satisfactory from the standpoint of the investor.

3. Anthracite Profits and Railroad Profits

The difficulty of analyzing anthracite profits is enhanced by the baffling relation which exists between the costs of producing and of trans-

¹ Thirty-five per cent in extra dividends.

porting anthracite. Where the mining and the carrying of coal are under the same management, the carriers have for years followed the policy of operating the mines at a slight profit, or even at a loss, while the chief profits went to the railroads.

There is little question regarding the extent of the railroad control in the coal fields.¹ Professor Jones begins his chapter on "The Transportation of Coal" with this statement: "The railroad coal companies, including the coal departments of the railroads mining coal directly, control over 90 per cent of the total output of anthracite coal. These companies, in turn, are controlled by the eight important anthracite carriers."

When the coal companies controlled by the railroads pay freight, they really pay it to themselves. It is therefore a matter of little consequence what the amount of that freight rate is. A profit is to be recorded somewhere, and no one cares particularly whether it is recorded on the books of the coal company or the railroad company. When an independent coal operator pays freight, he pays it to a railroad in which he has no concern. Under the circumstances, the manipulation of freight rates has been one of the favorite means of controlling the independent operators. The railroads, in reaching out for an increased control over the coal fields, have adopted this as one of the most workable methods for discriminating in favor of the companies representing their own interests.

¹ "Arbitration in the Coal Industry," *op. cit.*, p. 228-29.

The relation existing between coal mine profits and railroad profits is thus explained by Dr. Jones: "A high freight rate reduces the profit in marketing coal independently, and in the past has offered a strong inducement to the independent operator to sell his coal under contract to the railroad or its coal company (and this is, no doubt, the *raison-d'être* of the high freight rate). But even including the coal formerly sold under a perpetual contract, but now released by the order of the Supreme Court declaring these contracts illegal, only about 20 per cent of the output is affected by the freight rate, and this percentage is certain to become less and less, regardless of whether the freight rate be high or low. The freight rate, however, will become of importance, should the present attempts on the part of the government to divorce the business of transportation and mining meet with success. Inasmuch as very few of the railroad coal companies now return a surplus of earnings above expenditures, even with the present high price of coal, were these coal companies to become independent of the railroads, most of them, unless they could advance the price of coal still higher, would be compelled at the present anthracite freight rates to go out of business." (P. 145.)

The result of this policy has been the establishment of freight rates on coal that are generally considered to be abnormally high. The independent operators have made repeated attacks on these freight rates, alleging they are one of

the chief forms of abuse practiced by the dominant interests in the anthracite region.

The freight rates on anthracite to tidewater ports are quite uniform. Thus the Erie, New York, Susquehanna and Western, Ontario, and Central of New Jersey, charge \$1.60 per ton for prepared sizes from all mines to tidewater in the vicinity of New York. The Lackawanna rate is \$1.58, Reading \$1.55, Lehigh \$1.55, and Pennsylvania \$1.40. A similar uniformity prevails in the case of pea and buckwheat sizes.¹

The Interstate Commerce Commission has prepared an elaborate report on the cost of carrying this coal on the Central Railroad of New Jersey. "It was found that the total operating cost (including the cost of returning the empty cars to the mines) was 59.26734 cents per ton from the Wyoming region to tidewater; 44.35119 cents from the Lehigh region; and 49.03914 cents from the Upper Lehigh region."² The freight charges on this coal to Port Elizabeth and Port Johnson are: Prepared sizes, \$1.55; pea coal, \$1.40; and buckwheat No. 1, \$1.20. "If we give to the freight rate in each of these groups the weight to which each is entitled by virtue of the actual shipments, we arrive at an average freight rate for the Central of New Jersey of \$1.40 per ton. The cost of carrying such coal to tidewater from the Wyoming region is less than 60 cents; from the Upper Lehigh region,

¹ "The Anthracite Coal Combination," *op. cit.*, p. 134.

² *Ibid.*, p. 135-36.

less than 50 cents; and from the Lehigh region, less than 45 cents. On shipments from this last region, therefore, the freight rate exceeds by more than three times the actual operating cost. This cost, it should be clearly borne in mind, is merely operating cost. It does not include any return on the investment."¹

Similar figures were secured in Pennsylvania for the Public Service Commission by Price, Waterhouse & Co. These figures show the cost of "transporting anthracite coal from the respective mining sections in the eastern part of Pennsylvania to Philadelphia." The report was submitted January 1, 1914. The Price-Waterhouse report shows that for the year ending May 31, 1913, the cost of transporting anthracite on the Reading Railway was: from the Schuylkill field, 44.698 cents; the costs on the Pennsylvania were 61.043 cents by one route and 54.378 by another. These costs are operating costs, and make no allowance for the payment of fixed charges.

The margin between the cost of carrying the coal and the freight rate charged for the transportation is considerable. The average freight rate on the Philadelphia and Reading from the mines to Philadelphia is \$1.55.² Since the operating cost of carrying anthracite coal from the Schuylkill region to Philadelphia is less than 45 cents, the freight rate in this instance is more than three

¹ "The Anthracite Coal Combination," *op. cit.*, p. 136.

² *Ibid.*, p. 138.

times as great as the operating cost of transportation.¹

Professor Jones illustrates the profitableness of carrying anthracite coal on such a relation between operating cut and freight rate by citing the case of the Lehigh Valley. While it derives a large part of its total traffic from anthracite coal, its rates are among the lowest charged. During "the fiscal year 1913 the Lehigh carried 14,732,949 gross tons of anthracite. Its gross earnings from the transportation of this coal were \$18,556,161, which was over 50 per cent of its gross freight receipts, and 43 per cent of its total operating revenue. Its gross earnings per net ton per mile from the carriage of anthracite coal were 7.11 mills, and from all other freight 5.67 mills, or 25 per cent greater for anthracite. Were we to assume that the ratio of operating expenses to gross earnings was the same on anthracite as on all its traffic (67.62 per cent), the operating expenses chargeable against the transportation of anthracite would be \$12,547,676 and the net earnings \$6,008,485, or nearly 41 cents for each ton of anthracite hauled. But as it costs less per ton to move anthracite coal than general freight, the net earnings are even greater than this figure."²

Often it is hard to distinguish between the production costs and the transportation costs on anthracite. The facts suggest strongly, however,

¹ The Price-Waterhouse Report is in the form of a 63-page pamphlet containing the full statement of the method used in the making of calculations.

² "The Anthracite Coal Combination," *op. cit.*, pp. 138-39.

that freight rates on anthracite are fixed, not with relation to the cost of transportation, but on the basis of "all that the traffic will bear." The control of both production and transportation facilities enables the owner of the properties to make splendid returns on the investment.

4. *Anthracite Prosperity*

During the past decade the anthracite roads have enjoyed a surprising degree of prosperity, which has been as persistent as it has been generous. There are several ways in which this prosperity may be measured. First, there are the earnings of the railroads; second, the dividends; third, the surpluses; and fourth, the stock ratings. All four measures give a very definite idea of prosperity.

For the year 1913 the earnings on the common stock of the principal anthracite carriers, after the payment of all expenses, including fixed charges and preferred dividends, were:¹

Reading Company.....	17.57	per cent
Central of New Jersey.....	26.73	" "
Lehigh Valley.....	16.90	" "
Lackawanna.....	32.04	" "
Delaware and Hudson.....	12.95	" "
Pennsylvania.....	8.86	" "
Erie.....	3.67	" "
Ontario.....	2.08	" "
Lehigh Coal and Navigation Company.	8.93	" "

The last normal year of railroad operations is 1913. The business conditions in that year

¹ "The Anthracite Coal Combination," *op. cit.*, p. 140.

were below, rather than above, those of the ordinary year. The war conditions prevailing during 1914 make the figures for that year distinctly non-representative.

Some comment has already been made on the dividends declared by the anthracite carriers. There seems to be some relation between the proportion of anthracite business to total business and the prosperity of the railroad. The Central of New Jersey, drawing nearly half of its freight revenues from anthracite, has been paying from 8 to 12 per cent for a dozen years; the Lehigh Valley, the Lackawanna, and the Delaware and Hudson, with almost exactly half of their freight revenues derived from anthracite, have been able to pay regular dividends of from 4 to 20 per cent. At the present time, the Lehigh Valley is on a 10-per-cent basis, the Lackawanna on a 20-per-cent basis, and the Delaware and Hudson on a 9-per-cent basis. The Ontario and the Erie, with respectively two-thirds and one-third of their freight revenues derived from anthracite traffic, are not in the dividend-paying class. The continued payment of these large dividends, year in and year out, is an excellent index of prosperity.

Another prosperity measure is the surpluses which the railroads are able to lay by. Thus the Lehigh Valley had no surplus in 1902. "By 1909 it had a surplus of \$19,200,000, in 1910 this surplus had risen to \$27,000,000, and by 1911 to over \$30,000,000. In 1912, largely because of

the payment of the extra dividend of 10 per cent, the surplus declined to \$23,400,000, but increased in 1913 to \$25,000,000. The operations of the Lehigh Valley since 1904 have thus been highly profitable."¹

The prosperity of business enterprises is reflected, with a degree of fidelity, in the ratings which their securities enjoy in the stock market. Since the organization of the combination in 1898 there has been a strong upward movement in the stocks of the anthracite carriers.

Professor Jones has worked out a careful statement of the stock values of the anthracite roads since the formation of the combination of 1898. He bases his figures on "the average of the highest and the average of the lowest market quotations of the common stock of the eight important anthracite roads." He writes: "In 1898, the year when the beginnings in the development of the combination were made, the average of the highest prices at which the stocks of these roads sold was \$76, and the average of the lowest was \$63. From 1898 until 1909 there was an almost steady advance in the prices at which these securities were quoted. In 1909 the average of the highest quotations was \$231 and the average of the lowest was \$167. The high average in 1909 was partly in sympathy with the general high level of stocks in that year and partly in anticipation of the payment of an 85 per cent dividend by the Lackawanna Railroad. The

¹ "The Anthracite Coal Combination," *op. cit.*, p. 139.

declaration of stock dividends by the Lackawanna and the Lehigh Coal and Navigation Company in 1909 explains a part of the decline in 1910 of the average of the highest market quotations, and likewise the drop in 1911 is partly explained by the privilege given in 1910 to stockholders of the Lehigh Valley to subscribe at par to \$20,000,000 of new stock worth \$125 per share at its lowest quotation.

On the whole, therefore, it is clear that the formation of a combination, the maintenance of the freight rates at their high figure and the frequent advances in the price of coal have made the anthracite business a particularly profitable one."¹

Measured in any terms, anthracite profits have been most generous since the formation of the combination of 1898. Earnings, dividends, surpluses and stock ratings all reflect the prosperity of the railroad interests that control the anthracite industry. During the past fifteen years, whether times were prosperous or unprosperous, the anthracite carriers have been earning most substantial returns on the anthracite business.

5. Are Anthracite Profits Too High?

The \$7 paid by the consumer for a ton of coal goes to the miner, the producer, the carrier, and the retailer. The miner gets about \$1.80; the railroad company a like amount; there is the cost of up-keep and of selling the coal, before it comes to the retailer. Can the profits made

¹ "The Anthracite Coal Combination," *op. cit.*, p. 141.

by the anthracite interests on the mining of coal, the selling of coal and the transportation of coal be regarded as excessive?

Judged in terms of results, the question cannot be handled in the same way for all of the roads. To the Erie, for example, the anthracite combination has not brought prosperity. On the other hand, the Lackawanna is a remarkable example of the effectiveness of a conservative financial policy, a far-seeing and intelligent business policy and a well-controlled natural resource monopoly. Lackawanna profits are things to conjure with in the financial world.

There is a wide difference between the profits made by individual roads. At the same time, the profits of the anthracite railroads as a group, since the effective combination of 1898, have been uniformly high. The common stock dividend paid by ten anthracite carriers in 1914 averaged 9.1 per cent.

The representatives of the Reading, the Lehigh Valley, the Lackawanna and the other patently prosperous anthracite roads are quick to insist that the profits are not excessive. The reply reaches back into the old problem of monopoly, and raises the question: "Upon what basis shall the reasonableness of profits be determined?"

Take first the most flagrant case—that of overcapitalization. One company, like the Reading in the early nineties, starts a campaign to secure control of the major portion of the anthracite field. In order to achieve this result, it resorts

to a number of practices. First, it guarantees a company which it wishes to absorb, 7 per cent dividends on its capital stock. This 7 per cent thereupon ceases to be profits and becomes a fixed charge.

The distinction between 7 per cent as profits and 7 per cent as guaranteed dividends is important. A company in the course of its operations is able to earn and pay 7 per cent on its stock each year for eight years. A lean year ensues. The dividend is cut to 5 per cent and kept at that figure until times become more prosperous. Under such circumstances the dividend payment rises and falls with the prosperity of the business.

Suppose, on the other hand, that a 7-per-cent dividend is guaranteed by a leasing company. Through good and bad years alike the dividend must be paid. To meet this obligation a large surplus is carried over from good years. The 7 per cent guaranteed is a fixed charge of the same nature as an interest charge. The moment its payment ceases the company faces legal proceedings.

A guaranteed dividend may be reasonable at one time and unreasonable at another. The right of the railroad to earn 6, 7 or 8 per cent in 1910 and 1912 was scarcely questioned; but when the hard times of 1913 and 1914 came on, the same earnings were looked upon as unreasonable. The whole country was in the grip of a business depression. Everyone was suffering

more or less, and the demand of the railroads that they be allowed to increase rates and fares at the same time that they were paying their usual dividends seemed anything but fair to a greater portion of the population.

The promoter of an anthracite combination might very conceivably guarantee a dividend of 7 per cent on a property that could earn but 5 per cent. Such a profit would undoubtedly be excessive.

Overpayment may take another form. An anthracite producer decides to sell out. His property is bid for by a number of industrial leaders. The man who sells the property knows that, at present coal prices, it is worth only \$3,000,000. The buyer expects prices to rise in the near future, and gambling on this possibility, he pays \$5,000,000 for the property. Previous to the sale, the property was earning \$180,000 a year (6 per cent). The same amount equals less than 4 per cent on a \$5,000,000 capitalization. What may the new owner say to the consumer?

Suppose he should make this statement: "I bought this property for \$5,000,000 and paid cash for it. It is an investment of my entire wealth. Six per cent is not an unreasonable return on an investment. I believe that I have a right to 6 per cent, and I propose to raise prices until the property is earning \$300,000 instead of \$180,000 a year."

Such a statement would be out of the question in a competitive industry. Under competition

the lowest bidder sets the price, and if a man is so foolish as to pay for a business more than it is worth, he suffers the consequences. In the anthracite industry, however, the element of monopoly enters. Shall a plea which would be absurd under a system of competition be admitted under a system of monopoly?

There is, of course, no end to the possibilities of the case. If it is possible to pay \$5,000,000 for the property and raise prices until they yield a \$300,000 profit, why not pay \$10,000,000 for the property and raise prices until they yield \$600,000? The matter is thus easily reduced to the absurd.

The argument cannot be carried to its logical conclusion without appearing ridiculous. Where, then, is the stopping place? Obviously, there is none. So long as anthracite land may change hands at increased prices, so long will promoters and speculators anticipate price increases by offering more for the land at each successive transaction. The new buyer, having paid a larger price, will come before the people with the old plea: "I put my good money into this venture. Haven't I a right to 6 per cent on my investment?" Unlike the consumer, he is not forced to think seriously about the high price of coal.

The customary business transactions in a monopolized natural resource will lead, inevitably, to increased financial obligations that must result finally in higher prices. Even in the absence of speculation and rash, unintelligent buying, this

will be true. How much more will it be the case when the monopoly power which the resource possesses is eagerly sought after by groups of men aiming to secure wealth and business control?

There is another issue which must be considered as an essential part of the problem of determining the sufficiency of profits. This second issue is raised by the increase of land values.

A mine expert discovers coal. His employers buy the land at \$100 an acre and sell it at \$200 to a mining company. This mining company does not begin operations at once. A dozen years pass before the first coal is taken from the ground. Meanwhile, the demand for coal has increased. The supply has diminished and the land is now worth \$600 an acre instead of \$200. The question is raised as to a reasonable profit on the coal. Twenty dollars a year is a 10-per cent return on the purchase price. It is only 3 per cent on the present value. Sixty dollars is only 10 per cent on the present value, but it is 30 per cent on the original price.

Shall an increase in land values be regarded as an equitable basis for profits? Land value increase is due to the activity of the community. No one person is responsible for increased land values. The presence of population, the growth of commerce and industry, new discoveries and all of the forces that constitute a growing civilization make for increased land values. The individual made an investment of \$200 in coal land.

The community has trebled the value of the land by its activities.

The situation is grave. Transfers of property and speculation, on the one hand, and rising land values, on the other, provide the pretext for a constant increase in prices. For the consumer, relief is in sight along neither of these lines.

So long as increased land values may be capitalized as a basis for profits, so long as a buyer may allege the purchase price as a reason for the return that he is receiving, there is no limit to the amount of profits that the coal land owners may make on their anthracite properties. The consumer will find, added to the price which he is expected to pay for his coal, a steadily increasing amount, representing the monopoly power of the coal land owners.

Under the present system of estimating profits there is no possible basis for determining the adequacy of profits. The profits now being made by the coal owners, if calculated in terms of the present value of the anthracite land, perhaps are not excessive. If calculated in terms of the cost of the same land fifty years ago, they would be grotesque. A generation hence, under the present system of resource ownership, the anthracite coal lands may be worth, per acre, twice what they are worth today. Suppose that they were. Then the present-day profit of, let us say 8 per cent, would be reduced to 4 per cent. Surely, that is not a fair return on the investment! The logic of the situation will require the addition

to the price of the coal of an amount sufficient to continue the payment of 8 per cent; and this procedure will be followed in the face of the fact that the increase in the value of the property is due solely to the activities of the community, and of the further fact that during half a century the owners of the coal land have made net profits equal to many times the original purchase price of the land for mining purposes.

The profits made by the anthracite owners are clearly far in excess of the "cost of production plus a reasonable profit" idea, on which the statement of fair profits is ordinarily based. At the same time, since the cost price of the property to its present owners plus the rise in land value which has occurred since the purchase, may be taken into consideration, the term "reasonable profit" means nothing because of the lack of a stable base on which the reasonableness of profits may be calculated.

CHAPTER 6

A CONCRETE EXAMPLE—THE CONFLICT OF 1912

1. The Apparent Advantage of the Operators

THE evidence presented thus far, dealing with prices, wages and profits, would lead to the general conclusion that the operators have the best of it. The consumers are paying more for their product; the workers are fortunate if they keep pace with the rising cost of living. The operators, since the effective combination of 1898, exhibit every ear-mark of prosperity.

The general facts seem to favor the operators. Specific instances afford excellent illustrations of the way in which their monopoly power has been turned to excellent advantage.

Shortly after the formation of the anthracite combination in 1898, two increases in wages were granted to the anthracite workers (1900 and 1902). This increase in the labor costs was converted at once into higher prices. Furthermore, it was used as a pretext for additional advance in coal prices. Stove coal sold, wholesale, at \$3.70 in 1899, \$3.94 in 1900, \$4.32 in 1901, \$4.46 in 1902 and \$4.82 in 1903. From 1903 until 1911 it remained at about \$4.82. Since the settlement following the strike of 1912 it has been about \$5.06.

The anthracite strike of 1902 gave the operators the real opportunity to advance coal prices. At the beginning of the strike (May, 1902) coal, with

the regular discount off, was selling at \$4.02. By the end of the strike (November, 1902) the price was \$4.95. From that time until 1913, the November price of anthracite remained at \$4.95.

To what extent was this advance justified by the increase in wages granted in 1900 and 1902?

The question cannot be answered with absolute certainty. Professor Jones, commenting on the point, says (p. 158): "It is a difficult matter to make a wholly satisfactory estimate of the extent to which the higher price merely offsets an increase in the cost of mining, as this cost varies so much for the different companies, and in the different mines of the same company, and because of the difficulty of allocating to any one size, such as stove coal, for example, those elements in the expenses of mining which are properly chargeable to this one size—inasmuch as all sizes are produced together under joint cost."

A few available figures, covering this early period, give some idea of the extent to which an increase in wages meant increased profits to the operators and increased prices to the consumers.

Figures submitted by the Delaware and Hudson Company to the Interstate Commerce Commission are summarized as follows:

	<i>Price Received</i>	<i>Payrolls Other than Office</i>	<i>Cost of Mining</i>
1900.....	\$3.20	\$1.16	\$1.43
1901.....	3.57	1.24	1.54
1902.....	3.87	1.46	1.93
1903.....	4.10	1.53	1.96

During four years the labor cost of the coal increased 37 cents (32 per cent), the entire cost of mining increased 53 cents (37 per cent), and the price received for all sizes of coal increased 90 cents (27 per cent). On the face of things the operators were modest—raising the price only 27 per cent, as compared with an increase in the total cost of mining of 37 per cent. Actually, the increase in cost was 53 cents and the increase in price 90 cents, leaving for the operator on each ton of coal sold, a net advantage of 37 cents.

The increase in the price of anthracite from 1900 to 1903 may be justified, in part only by the increase in wage rates. A large slice of the increase goes to increased profits.

The same facts hold true for figures submitted in the Sherman Anti-Trust case by the Philadelphia and Reading Coal and Iron Company. Mining costs, including wages, supplies, improvements and general expenses, rose from \$1.59 in 1899 to \$2.20 in 1903—an increase of 61 cents, or 38 per cent. The price received for all sizes of coal rose from \$1.84 to \$2.63—an increase of 79 cents, or 43 per cent. In this case the price received actually rose higher in percentage than the percentage of increase in labor costs.¹

Labor disturbances have been very successfully employed in late years by the anthracite operators as a means of increasing coal prices. Public sympathy is won for the transaction by a simple, psychological trick. Wages were increased 10

¹ "The Anthracite Coal Combination," *op. cit.*, pp. 158-59.

per cent in 1902. Is it not just and right that the operator should be able to make good this extra cost by an addition to the price of, let us say, 10 per cent? The statement is simple, nor does it occur to the ordinary consumer of coal that the increase in wages raised only the labor cost of the coal. The labor cost in 1902 was for one company (the Delaware and Hudson) \$1.46. Ten per cent of this labor cost is 14.6 cents. The coal was selling at something over \$5 to the consumer. Ten per cent of \$5 is fifty cents. The 10 per cent is the same in each case. The amount on which the percentage is taken varies so much in the two cases that more than three times as much money, on each ton of coal, is taken by the operator from the consumer as is given by the operator in the increased wages of the workers.

2. A Typical Situation

The most complete body of evidence bearing on the relation between increased labor costs and increased prices was collected by the United States Bureau of Labor in 1912.¹ There was a suspension of work; a sharp price increase in many sections, based on coal shortage; and a final settlement that gave the miners 10 per cent more wages, while it abolished the sliding scale, and raised the price of coal about 25 cents per

¹ "Increase in Prices of Anthracite Coal following the Wage Agreement of May 20, 1912." Prepared under the direction of the U. S. Commissioner of Labor by Basil M. Manly. House Document 1442, 62d Congress, 3d Session. A remarkably clear and detailed presentation of the case.

ton. The case is typical of the relations between labor, capital and the consumer of anthracite.

After a suspension lasting six weeks, an agreement was signed, May 20, 1912, under which the wages of the miners were increased, the price of coal was raised and the operators reaped a rich harvest of increased net profits. If the matter is examined in detail, it appears that the increase in wages was considerably less than the corresponding increase in the cost of living between 1903 and 1912; that the increase in the price of coal to the consumer was considerably in excess of the increase in the cost of producing the coal; and that there was a marked increase in profit to the coal companies. As an outcome of this one situation, labor was a net loser, the operators were the net gainers and the consumers paid the bill.

The award of the Anthracite Coal Strike Commission made in 1903, had continued practically unchanged by the agreements of 1906 and 1909. Some marked alterations were brought about as a result of the conflict of 1912.

The 1903 agreement provided for a wage payment based on the wholesale price of coal at tide-water. "For each increase of 5 cents in the price of white ash coal, of sizes above pea coal . . . above \$4.50 per ton, the employees shall have an increase of 1 per cent in their compensation." (Award of 1903, Sec. VIII.) Under the operation of this "sliding scale," the mine workers received an increase in wages over the minimum figure of 4 per cent in 1903; and this percentage of increase

varied from 1903 to 1911, when it was $4\frac{1}{2}$ per cent. At its lowest, it was $3\frac{5}{8}$ per cent; at its highest (1912), 7 per cent. The average per cent of increase received by the mine workers under the sliding scale during the nine years of its existence was 4.2 per cent.

The agreement of 1912 abolished the sliding scale, but in its place there was a provision for an increase of 10 per cent over the wage rates provided for in the award of 1903.

Following their agreement with the workers, the operators increased the wholesale prices of coal an average of 25.82 cents per ton.¹ This figure is secured by comparing the prices of coal in June, July, August and September, 1911, with the prices in the corresponding months of 1912. This increase in wholesale prices resulted in a corresponding increase in retail prices and the consumers were compelled to shoulder the added burden.

The operators explained that the increase in wholesale prices of coal was made necessary because (1) of the advance in wages resulting from the agreement of May 20, 1912; and (2) because of the increases in the cost of production which had taken place between 1902, the date of the last increase in the wholesale prices of coal, and 1912. These increases were caused by the growing difficulties of mining, by additional taxes and more stringent mining laws.²

¹"Increase in Prices of Anthracite Coal," *op. cit.*, p. 11.

² *Ibid.*, p. 12.

The public discontent which was aroused by the higher anthracite prices led to an investigation of coal prices. The House of Representatives ordered the investigation which was made for the Commissioner of Labor by Mr. Basil M. Manly. The material secured in the course of this investigation furnishes the data on which this chapter is based.

Mr. Manly was able to secure, through the Bureau of Labor, a large amount of information regarding the operations of most of the important anthracite companies. He reports furthermore, that "in every case the statistics presented by the companies have been checked as far as possible either against the books of the companies from which they were derived or against the public records of the company, the correctness of which have been certified by public accountants."¹

The facts regarding wholesale prices include about 70 per cent of all the anthracite coal sold. The facts regarding cost of production include about 54 per cent of the entire output of the region. The Congressional report is therefore based on the facts furnished by the coal companies themselves; these facts were checked wherever possible against public records, and the material represents a majority of the business done in the coal regions.

3. The Consumer in 1912

The consumer was an unqualified loser in the events surrounding the 1912 settlement. Whole-

¹"Increase in Prices of Anthracite Coal," *op. cit.*, p. 10.

sale prices were increased about 25 cents per ton and retail prices were increased from 25 to 50 cents per ton. In this case, as in many that have preceded and that will follow it, the consumer is called upon to foot the bill.

No sooner had the operators granted the increase in wages in the agreement of May 20, 1912, than they issued a circular prescribing increases in wholesale prices varying with the size of the coal. The prepared sizes (including chestnut and larger sizes) were increased an average of 31.23 cents per ton. The price of pea and the smaller steam sizes of coal was increased 16.14 cents per ton.

The prepared sizes are consumed principally in domestic use, while the steam sizes are used by the manufacturers and owners of apartment houses, office buildings and other public structures. "The reason for placing the larger increase on the prepared sizes is said by the coal operators to be due to the inability to sell the steam sizes in competition with bituminous coal at any greater advances than those which were made."¹

The decision of the operators to increase the price of domestic sizes 31 cents at the same time that they increased the price of steam sizes 16 cents deserves consideration. From the moment it was decided that the miners should have an increase in wages, the operators began casting about for a means of saddling the increase on the consumers of coal. Here, as in any other case of monopoly power, the rule on which prices are

¹ "Increase in Prices of Anthracite Coal," *op. cit.*, p. 57.

fixed is found in the famous railroad axiom, "all that the traffic will bear." The price is therefore fixed at the highest profitable point. Had the prices of anthracite steam sizes been raised more than 16 cents, the users of these sizes would have abandoned anthracite in favor of bituminous coal. The 16-cent increase represented the limit of the operators' monopoly power in that direction.

The consumers of domestic sizes of anthracite coal presented a much easier mark than the users of steam sizes. The average householder prefers anthracite to bituminous coal because it makes less dust and dirt. Then, too, his rented furnace is built to burn anthracite and his experience is wholly with the use of anthracite. If he lives in a rented house, as more than two-thirds of the city and town dwellers do, and if he has acquired the habit of burning anthracite, the danger that he will abandon anthracite in favor of soft coal is remote. He is therefore a peculiarly fit subject for the exaction of a monopoly tribute. It is for this reason that the price of domestic sizes was increased by about twice as much as the price of steam sizes during the 1912 readjustment.

The added cost of anthracite to the consumers which resulted from the 1912 price increase, is estimated by Mr. Manly at \$10,832,843. Fully two-fifths of this amount covers the increase in chestnut coal, which is the most widely used of all the domestic sizes.¹

The consumer suffered another heavy loss owing

¹ "Increase in Prices of Anthracite Coal," *op. cit.*, p. 55.

to the passing of the discounts on prepared sizes during the spring and summer of 1912. For a number of years it has been customary to allow purchasers discounts of 50 cents per ton in April, 40 cents per ton in May, 30 cents in June, 20 cents in July and 10 cents in August on prepared sizes. The object of this discount was to induce people to lay in their winter supply of coal in the spring and thus make work for the mines during the spring and summer months. The usual discount was not allowed during 1912. This suspension of discounts alone cost the consumer, according to the estimate made by the Bureau of Labor, about \$2,500,000.

In addition to the increase in the regular price of coal and to the suspension of the usual discounts, there were a considerable number of cases in which coal was sold at a premium over current wholesale prices. In some cases this premium is reported to have gone as high as \$2.00 per ton above the prevailing circular prices for the same grade and quality of coal.

The possibility of selling anthracite at a premium arose from the shortage due to the suspension of operations in the early part of the year.

There were a number of communities, notably in New England, where the retail dealers sold coal at scarcity prices. Although this practice was not widespread, it proved a serious additional burden where it was in vogue.

Although it is impossible to estimate accurately the increased burden placed upon the consumer

by the strike of 1912, it is the Bureau of Labor estimate that the increase in prices and the suspension of discounts alone forced the consumer to pay \$13,450,000 more for his coal at 1912 prices than he had been compelled to pay at 1911 prices. This additional expenditure of \$13,500,000 brought not one iota of benefit to the consumers. Indeed, it is accompanied in many cases by inconvenience and dissatisfaction. The \$13,500,000 of added cost bought the same number of tons of coal, containing the same number of heat units and prepared under the identical conditions.

4. The Worker in 1912

The consumer paid the entire bill incident to the 1912 price increase. He was forced to add more than \$13,000,000 to the cost of his coal. It seems evident that someone must have profited considerably by the transaction, and the general supposition is that that someone was the mine worker.

Oddly enough, and public opinion notwithstanding, the mine worker seems to have gained comparatively little by the 1912 agreement. Indeed, it undoubtedly represented a net loss for him, as compared with his position in 1903. The mine worker certainly cannot be accused of getting the lion's share of the price increase. Only a little more than one-third of it came his way. The Bureau of Labor reports that "a careful computation based on the records of one of the largest companies shows that the increase in labor cost

resulting from the agreement of 1912 and the readjustment of the wages of men not covered by the agreement, amounted to 9.75 cents per ton."¹ At the same time, it will be remembered that coal prices increased on the average more than 25 cents per ton.

The mine worker did benefit immediately and directly by the strike. The advance in wages which the abolition of the sliding scale and the increase of 10 per cent over the wage of 1903 provided, gave an increase of 5.6 per cent in wage rates. Estimating the amount of this increase upon the basis of the shipments from June to December, 1912, the miners gained about \$4,000-000. Against this amount there must be placed the cost of the strike in money and in privation.

The miners' demands for 1912 included a 20 per cent increase in wages. They actually received a net increase of 5.6 per cent. What did this mean to them in comparison with the increased cost of living during the same period of years?

The United States Department of Labor shows, in Bulletin 140, that the cost of food increased 30.8 per cent between 1903 and 1912. During the same years the cost of clothing, shoes and the like increased approximately 20 per cent. While no extensive study has been made, it seems that the cost of rent in the anthracite fields has increased during the same time from 10 to 20 per cent. Figuring the food as two-fifths of the workingman's expenditure; and rent and clothing

¹ "Increase in Prices of Anthracite Coal," *op. cit.*, p. 28.

each as one-fifth, the apparent increase in the cost of living would be from 20 to 25 per cent. The increase in the wage rate between 1903 and 1912 was therefore less than one-third of the increase in the cost of living.

There is one additional factor which must be borne in mind, and that is that the anthracite miner had more opportunities to work in 1912 than he had in 1903. The total days worked by the anthracite mines in 1912 were 231; and in 1903, 206. This was an increase of 13 per cent in working time. Even counting this working time as a part of the benefits accruing to the miner during the interval between 1903 and 1912, the miner's increase in earnings did not make amends for higher prices.

The conflict of 1912 left the mine workers still behind in their race with the cost of living, even though they gained \$4,000,000 in additional wages. The gain of \$4,000,000 was immediate. The loss through increased prices was permanent.

5. The Operators in 1912

The Bureau of Labor estimates that the operators added \$13,450,000 to their gross receipts as a result of the 1912 strike. They were enabled to do this because of the increase in wholesale prices and the suspension of discounts already noted. They had a further source of revenue in the sale of contract coal.

Until the decision of the United States Supreme Court in December, 1912, the anthracite railroads

purchased under contract the entire output of a large number of collieries operated by individuals and companies. Under these contracts, the price paid for prepared sizes is 65 per cent of the average tidewater price. When the price of coal was increased in June, 1912, these contracts were not changed, and consequently the independent companies, selling on this basis, received only 65 per cent of the 25-cent increase in the price of prepared sizes at tidewater, or 16.25 cents per ton, while the purchasing operators received 35 per cent of the increase, or 8.75 cents per ton. The independent operators paid their miners the same increase in wages as the larger coal companies and were probably subject to the same general operating conditions. The independent companies received an addition of $16\frac{1}{4}$ cents per ton in the price and paid an advance of 9 cents per ton in wages, leaving a margin of $7\frac{1}{4}$ cents to cover the other increased costs. The purchasing companies, on the other hand, had a margin of 16 cents (25 cents minus 9 cents) on their own coal, plus 8.75 cents on each ton that they purchased and sold under the 65 per cent contracts.¹ Here, then, was an additional source of revenue for the larger operating and purchasing companies.

There seems to be some basis for the operators' assertion that the cost of producing coal had increased. The agreement of 1912 added 9 cents burden to the labor cost of coal. Meanwhile, between 1903 and 1912, a number of factors

¹ "Increase in Prices of Anthracite Coal," *op. cit.*, p. 13.

were responsible for adding to the cost of production.

1. The veins worked were growing thinner, which necessitated the removal of a larger amount of rock and refuse.
2. The increasing depth and area of mines added to the cost of transporting and handling of coal and of ventilating the mine.
3. Many of the materials entering into mine construction had increased in price.

There are a number of decreasing production costs which must be set off against those which have increased. For example, most iron and steel was lower in 1911 than in 1903. During that time advances had been made in economy and efficiency of mining, cleaning, preparing and hauling coal. Mr. E. B. Thomas, president of the Lehigh Valley Coal Company, is quoted as saying, "The improvements already made, together with those now in progress, tend not only to offset the increased expense in mining, incident to the greater depth of the working and the long underground haul, but also result in a greater percentage of prepared sizes of coal, the same having increased 9.38 per cent in the last five years."¹

The status of production costs is thus summa-

¹ Annual Report of the Lehigh Valley Railroad Company, 1908, p. 48.

rized in the Federal report: "The present report shows that the recent increases in prices have been more than sufficient to compensate fully those companies whose costs of production have increased more rapidly during recent years, and at the same time has very greatly increased the profits of those companies, of whom there are at least several whose costs of production either decreased or remained stationary during the same period.

"This conclusion is based on the fact that when normal years are compared, none of the companies has suffered an increase in the cost of production equal to the increase in the selling price over and above the recent advance in wages." As a result of the increased activity following the suspension of 1912, "the cost of production of one important company has been lower during the last six months of 1912 than during any year since 1903, in spite of the increase in wages required by the settlement of May 20, 1912. These comparatively low production costs during the latter half of 1912, combined with the increased prices, have created for this company during the six months net earnings greater than it has had in any entire year from 1902 to date."¹

The total result for the operators was an immense increase in net receipts. "During the four months—June to September, 1912—the seven companies which shipped 69.3 per cent of the anthracite coal during the same period received

¹"Increase in Prices of Anthracite Coal," *op. cit.*, pp. 12-13.

at the advanced prices for their shipments \$3,-572,588 more for their coal than they would have received at the prices prevailing in the same months in 1911." This is equivalent to an average of 25.82 cents per ton advance over 1911 prices.

6. Some Lessons from the 1912 Experience

The incidents surrounding the suspension of 1912 verify the impressions gained from previous experiences with labor disturbances in the anthracite industry.

The operators, controlling a great natural resource, get what they can for their product. The price of those anthracite sizes that compete with bituminous coal was increased by only half as much as were the prices of the "prepared sizes" which are used in domestic consumption and do not compete with bituminous coal. The strike, as in previous cases, was used as a pretext for adding to prices an amount equal to three times the increased labor cost of the coal. This gave to the coal companies a handsome profit of \$13,000,000 in 1912 and probably \$10,000,000 in subsequent years.

The mine workers, after having perfected their organization and waged a costly struggle, found themselves, at the end of the struggle, still unable to cope with the increase in the cost of living.

The consumers fared worst of all. They paid a round increase of \$13,000,000 for their coal in 1912, over the 1911 prices; they got no more and

no better coal in return for this immense price increase.

The struggle of 1912 came and went. The operators profited handsomely, the miners fared indifferently, and the consumer foots the bill.

CHAPTER 7

AN OBJECT LESSON IN MONOPOLY

1. The Anthracite Lesson

THE lesson taught by the anthracite situation is unmistakable. The advantages and disadvantages of the private monopoly of natural resources are clearly portrayed. The conclusion cannot be avoided.

The situation is stated in the body of facts presented in the last three chapters. The consumer, the worker, and the producer each face certain aspects of the issue. In its larger form, and summarized, the question resolves itself into a consideration of the price of coal to the consumer, the rate of wages to the worker and the rate of profits to the operator. The consumer is better off when his dollar buys a larger quantity of coal; the worker is potentially better off when he receives a higher rate of return for each hour or for each unit of labor; the producer is presumably better off when he receives a larger percentage of return on each dollar of investment.

A summary of the relative position of consumer, worker and producer during the past fifteen years under the effective anthracite combination of 1898, appears below. The position of the consumer is stated in the relative number of tons of stove coal¹ that \$10 will buy at New York

¹ The prices of egg, chestnut and pea advanced faster between 1900 and 1912 than did the price of stove coal.

wholesale prices; the position of the worker is stated in the rate of wages per hour or per unit of work; and the position of the producer is stated in terms of dividend rates. Tons of coal, wage rates and dividend rates are all reduced, in the table, to index numbers:¹

TABLE XIV.—INDEX NUMBERS FOR PRICES, WAGE RATES, AND DIVIDEND RATES IN THE ANTHRACITE INDUSTRY, 1900 TO 1914. THE FIGURES FOR 1900 TO 1904 EQUAL 100.¹

	CONSUMER. PURCHASING POWER. <i>Number of Tons for \$10</i>	WORKER. WAGE RATES. <i>Wages Paid to Miners</i>	OWNER. RATE OF DIVIDENDS. <i>Average Dividend Rate</i>
1900.....	113	95	85
1901.....	104	95	98
1902.....	100	95	75
1903.....	92	108	114
1904.....	92	108	159
1905.....	92	108	242
1906.....	92	108	268
1907.....	92	108	281
1908.....	92	108	278
1909.....	92	108	461
1910.....	92	108	281
1911.....	92	108	395
1912.....	88	114	287
1913.....	88	114	284
1914.....	88	114	272

¹ The method of finding the index number is as follows: The number of tons of coal that could be bought for \$10 is ascertained for each year by dividing the price of one ton into \$10. The average for the first five years (2.25 tons) is taken as a base. Arbitrarily it is stated as 100. The number of tons that the consumer received in 1900 for \$10 was 2.54. If 2.54 is divided by 2.25 (the base) the quotient is 113. The results for each year are computed on a common base. Since they have been reduced to a common denominator, they can be compared more readily than in their original form. Since the percentages or index numbers for prices, wages and dividends are all secured in the same way, they also may be compared.

The relative position of the three parties at interest in the anthracite field during the fifteen years since the combination of 1898 became effective, shows the owners to be the real gainers. The consumer, in 1900, could buy with \$10 two and a half tons of stove coal at tidewater prices. By 1914 the increase in prices reduced the amount that he could buy with \$10 to a little less than two tons. The wage-earner received an increase in wages in 1903 and in 1912.¹ These two advances have bettered his position by about one-fifth. Meanwhile the average dividends paid by the ten leading anthracite railroads advanced from 2.8 per cent in 1900 to 9.1 per cent in 1914. As compared with a loss of 20 per cent to the consumers and a gain of 20 per cent to the workers, the owners show a gain of 220 per cent.

The situation becomes even more acute if the figures are compared for the last five years, rather than for the year 1914, which, from a business standpoint, was unprosperous. During the past five years the purchasing power of the consumer has remained at about the same figure, 90, as compared with 113 in 1900. The wages of the workers have increased slightly, making a figure, for the five-year period, of about 112, as compared with 95 in 1900. The average dividends of the anthracite carriers in the past five years have been 306, as compared with 85 in 1900. The consumer's purchasing power shows a slight decrease, the worker's wage a slight

¹ There was also an increase of 10 per cent early in 1900.

increase and the owner's rate of profits an increase, for the five-year period, of 260 per cent.

The profits as stated here are the apparent profits in the form of dividend rates on the common stock. They make no allowance for increase in capitalization, nor do they take into consideration the fact that the anthracite business comprises only a part of the business of these companies. Unlike the price to the consumer and the wage rate to the worker, the dividend rate is at best merely an indication of prosperity. It is neither an accurate nor final measure. Unfortunately, it is the only measure available.

Since the Anthracite Coal Combination got a foothold the workers have gained somewhat, the consumers have lost somewhat. The supreme advantage of this monopoly period has gone to the monopolists.

2. The Losers and the Gainers from Monopoly

Anthracite is only one of the many important natural resources that is being rapidly monopolized through the successful efforts of financial and industrial leaders to concentrate ownership. The lessons drawn from the anthracite monopoly may justly be regarded as significant and, in a large sense, typical of the results that will follow from the monopoly of other equally important natural resources.

The consumer carries the burden of monopoly. Monopoly prices are fixed at a figure representing "all that the traffic will bear." Increased

costs of carrying on business, no matter what their origin, are passed on by the monopoly to the consumer in the form of increased prices. The power of substituting some other commodity for the one that is the subject of monopoly limits the price that the monopolist may charge. Subject only to this power of substitution, the monopolist gets all that he can.

The worker gains nothing from the presence of monopoly. As an employee of the monopoly, he is paid wage rates that are not materially different from the wage rates paid in competitive industry. The present method of fixing wage rates, by competition in the open labor market, makes it inevitable that this should be so. Industry pays for labor not what it can, but what it must. Even though a monopoly could afford to pay a much higher wage than a competitive industry, it need not, and therefore does not, do so.

The monopolist is the real gainer from monopoly. The worker who serves the monopolist is paid the going rate of wages, and while the consumer foots the bill, the monopolist records his advantage in the form of increased dividends.

The figures show conclusively that these things are true of anthracite. There is good reason to believe that they will hold no less true for other equally powerful natural resource monopolies.

3. The Larger Menace of Monopoly

The facts cited thus far have referred to the financial cost of monopoly. They are definite.

They are significant. They are the only monopoly facts that can be measured in accurate statistical terms.

There are other aspects of monopoly which are more far reaching in their importance than any to which allusion has been made. Monopoly affects the economic, social and political organizations of society in ways so fundamental as to attract the attention, during late years, of students, agitators, politicians, statesmen and every other group of people interested in progress.

A recent writer makes this statement regarding the relation existing between the anthracite monopoly and the social order: "We have referred to the beginnings of concentration of wealth and ownership in the anthracite region as one of the causes of the break-up of the Union. The force of this factor increased to such an extent as not only to prevent the growth of the Union, but practically to control the industrial, social and political welfare of the region."¹

Monopoly strikes at the basis of social organization. Monopoly affects society, root and branch. From every angle it appears as a menace to the democratic future of the community in which it exists.

4. The Economic Effects of Monopoly

The economic effects of monopoly are of far-reaching consequence. Four will be considered here. First, the natural resource monopolist

¹ "Conciliation and Arbitration," *op. cit.*, pp. 214-15.

controls the jobs or opportunities for work; second, he has a price-fixing power over the thing he produces; third, he has an automatic income-yielding machine; and fourth, his monopoly power enables him to appropriate values socially created. These four economic effects of natural resource monopoly give the monopolist a position of overwhelming advantage.

First, and most important to the immediate interests of the great mass of mankind, the natural resource monopolist controls the opportunities for work. Under the conditions of modern industry all men must work for a living. The ultimate source of livelihood is the store of wealth contained in nature's treasure-house. The individual who becomes owner of a part of this treasure-house may dictate to his fellow men the conditions of life to which they must subject themselves if they are to use the things that his part of the earth produces.

The owners of the anthracite regions are in a position of peculiar strategic advantage because the field is so limited and because they have so absolute a control over it. There are 175,000 men who work for the anthracite combination. There is dependent on these workers a population of perhaps 500,000. The mine owners, in theory at least, may allow or deny these men the opportunity to make a living.

Over great sections of the anthracite field there is no other considerable source of livelihood save that offered by the anthracite owners.

The workers must take the work that the mine owners give them or else they must go elsewhere. Under such circumstances, the companies wield the final power of saying to a man and to his family, "Thou shalt eat" or "Thou shalt not eat!"

The point is well illustrated by a remark made by a witness before a Congressional Investigating Committee in 1887. A railroad superintendent, when asked why he was so sure the striking men would go to work at the company's terms, replied, "Their necessities." "Asked if he meant 'starved out,' he replied that the company did not propose to keep the men out till they starved, but reminded the Committee that 'it (was) a necessity for everybody who works that they get work.'"¹

With this control of the chance to work goes a control of the conditions of work and life that is appalling in its completeness. This same Congressional Committee found that companies were paying by the "wagon," instead of the ton, and sending in wagons that held more than the standard wagon was supposed to hold; they found that men were docked heavily if the coal sent to the surface was not of a certain quality, that the companies were often slow in making payments of wages. The committee found, further, that where the company owned a large block of property, upon which a town was built, that the company owned the houses, the stores, the butcher shops; that the men were forced to

¹ "Conciliation and Arbitration," *op. cit.*, pp. 237-38.

subscribe to the income of the company doctor; in short, that the workers were not only working for the company, but were living for the company as well.

The miners were thus subjected by their employers to an economic pressure from every side. During later years many of the worst abuses, involving company houses, company stores, the sale of powder at exorbitant figures by the company, and the like, were abolished. The economic pressure on the job remains, and always will remain while one man owns the resources with which another man must work in order to live.

Perhaps the most effective weapon in the hands of the operators, for controlling the men through their jobs, is surplus labor. Wave after wave of immigration has inundated the anthracite region.¹ Speaking alien languages and accustomed to varying standards of living, the alien groups have pressed hard upon one another. Where there are two men competing for one job, the strife is apt to be keen enough if the men are friends and neighbors. When the two are of alien race, nation and language, the struggle becomes brutal.

In the anthracite fields, as elsewhere, the employers have relied upon the presence of more men than there are jobs for much of their power. Not until the solidarity expressed in the organization of the United Mine Workers of

¹ "The Slav Invasion," F. J. Warne, 1904; "Anthracite Coal Communities," Peter Roberts, 1904.

America began to make itself felt, was this power seriously curtailed.

The second economic effect of monopoly has been commented upon at sufficient length. The monopolists, through their monopoly power, fix prices and thus cut in upon the livelihood of all those who consume their product.

The monopolist, in the third place, enjoys, in his ownership, an automatic income-yielding machine. The great majority of people work for the income on which they depend for a living. They exchange so many hours of effort for so many dollars of income. The owner of a desirable natural resource is under no such obligation. His ownership puts at his disposal a wholly sufficient method of securing an income.

Where there is land enough, or where there are resources enough for all, no monopoly price can be put on any single unit of the resource. So long as there are farms to be had for the asking, no owner can get a price for unimproved farm land. It is only after the supply is exhausted that resources possess monopoly power.

In the case of anthracite, the resource is so limited that, almost as soon as its practicability was demonstrated, all the land known to contain anthracite commanded a price. This land was readily monopolized, and the entire community was clamoring for the product.

Under these circumstances, the owner of a piece of anthracite land can secure, in return for his bare ownership, an income. Whether he has

bought the land knowing it to contain anthracite or whether he had bought it for some other purpose, the fact that it does contain anthracite enables him to transfer his property to a mining company with the stipulation that for each ton mined within 10 years, 6 cents shall be paid the owner in royalty; for each ton mined within more than 10 and less than 21 years, 7 cents, and so on. By such means, the owner is put in possession of an income that will continue so long as the mining operations on his property continue.

The owner is under no obligation. He does not work for his royalty with either his hands or his head. He owns a piece of property, and because of this ownership he receives a share of the proceeds from each ton of coal that is mined.

The owner of a select portion of nature's storehouse owns for a living. He secures his income in return for his property titles.

There is a fourth economic result of the monopoly of natural resources. A title to natural resources often becomes more valuable as time goes on. Resources are made valuable by the presence of permanent populations, educated to their use. Manhattan Island sold for \$26 because the Indians had no use for a harbor. If Manhattan had belonged to a nation of traders instead of a nation of hunters, it would not have sold for £1,000,000 sterling.

Other things being equal, the more permanent, progressive and intensive a civilization is, the

more will resources be worth. This is always true of the site values in city lots, for example; it is true of the power in waterfalls unless a new source of power is discovered; it is doubly true of a diminishing resource, like a fuel or a mineral, where each ton mined is a ton less in the ground.

Anthracite is a diminishing resource, limited in extent. As the supply decreases, the demand remaining constant, the price rises. As the population grows, increasing the demand, the price rises. As people build larger houses and introduce more extensive heating appliances, the demand increases and the price rises.

The owner of anthracite land receives an income because he owns land from which coal is being mined. His income is augmented by the increase in the demand for anthracite and by the decrease in the supply.

The private ownership of natural resources gives the owner an immense economic power. He has a large control over those who work for him; he places a monopoly price on his product; he enjoys an income in return for his ownership; and by virtue of his ownership, he receives, further, an increase in values due to the growth and progress of society.

5. The Social Effects of Monopoly

The social effects of monopoly arise largely out of its economic effects. Monopoly creates inequality; makes for class distinctions; pro-

duces exploitation and makes impossible equality of opportunity. In all of these ways monopoly affects the organization and progress of society.

Monopoly creates inequality. Herbert Spencer a half century ago pointed out, in Chapter 9 of his "Social Statics," that if any person could own any piece of property and if there was no limit to the amount of property that might be owned by any one person, then one individual might, by gaining possession of all of the property, let us say, in Cuba, exact a tribute (rent) from every person in Cuba. This rent would be paid for the privilege of occupying land belonging to the man who had secured control of the island.

Inequality of wealth is best created by permitting one man to own something that all of his fellows must have. The owners of the anthracite fields have an almost perfect example of a resource, limited in area, upon which millions depend for fuel. The inevitable consequence of such a situation is that the owners of the coal fields become rich, even though those who actually mine the coal are making less than a decent living.

A reading of Gustav Myers' suggestive histories of American and Canadian fortunes, in which he traces minutely the origins of private wealth, leaves in the mind one clear-cut impression—that the great fortunes were built for the most part upon the ownership of land, franchises, patents or other special privileges. The ownership of a

natural resource gives the owner a power over wealth that inevitably makes him richer than the people who put the products of his resource on the market.

The second social effect of monopoly grows directly out of this first one. Monopoly is the largest single factor in creating the basis for a class distinction which at the present time takes the form of a distinction between owners and workers. Democracy is opposed to class distinctions. Inevitably, then, it must oppose monopoly.

The owner of a resource, as has been shown, receives an income because he is an owner. If all of the people owned resources and received income from their ownership, such a form of income would make no distinguishing mark between man and man. Resources are limited in extent, however, and the ownership of a resource by one person automatically excludes other persons from a like opportunity.

Owners of desirable bits of the earth's surface, without the expenditure of any effort may demand and receive rent of their fellows for the use of their property. What must become of those fellow beings who use the gifts of nature that are owned by others?

The workers who use the resources must put forth sufficient exertion to provide for the necessities of those dependent upon them, and in addition, they must produce an amount sufficient to pay rent to the resource owners.

Here, then, are two kinds of people. One kind lives upon its property; the other kind lives on its labor. One derives its income from ownership; the other from work. One is the recipient of property income; the other of service income. This economic distinction forms the basis for two classes in society.

The distinction between owners and workers is not new by any means. If history tells the truth, the same distinction existed in Egypt, Carthage, Greece, Rome. Sometimes the workers were freemen; more often they were slaves. During the middle ages the great landowners, backed by the Church under the Feudal system, exacted a return in labor or in kind from the serfs who were attached to the land. The situation, historically, is too well known to demand further illustration. Always those who owned property were able to live upon the labor of another group which put the property to use.

The self-same distinction will exist and does exist in any community which allows private individuals to secure possession of natural resources and to deny to their fellow men the right to their use.

The existence of class distinctions leads inevitably to class antagonism. Those who are living upon their property at the expense of the community are willing to sacrifice anything except the right to collect rents from the rest of the world. Meanwhile, they must use some device to cover up the fact that the great body of human

kind pays them a direct or an indirect tax because of their ownership. If no one owned undeveloped land, it would make impossible gains that are now derived from land held, unimproved, for an increase in value. The private ownership of resources is one of the most effective means of emphasizing the distinction between those who own and those who work.

European aristocracy is built upon the distinction between owners and workers. The aristocracy owned the land; the peasantry worked it. The aristocracy lived, free from hand-soiling toil; the hands of the peasants were gnarled and rough.

No member of the aristocracy could work at common labor and stay in his class. When Count Tolstoi went out into the fields and mowed with the peasants, all Europe treated the event as unique. No member of the aristocracy ever worked with his hands. The man who worked with his hands was no gentleman. Hand work branded the hand worker as of a lower social grade than was the person who never did hand work.

The same feeling appears, even more strongly marked, in communities where slavery exists. The slaves do the hard work. The master class holds itself above labor.

The owning class does not work. How then can it live?

The answer to that question leads on to the next point in the argument. The ownership, by

one group in the community, of the natural resources enables the owning group to live at the expense of the working group.

The oft-reiterated saying, "He who will not work, neither shall he eat," is revised by the economic world, until it reads, "He who owns the land may eat and do no work." The owners of natural resources are able, because of this ownership, to live without work.

The way in which the owners of resources may make others pay them rent is clear enough. Men and women must live upon the products of the earth. If all of the earth is preempted, those who do not own must make terms with those who do. That is true, but is it also true that the ownership of natural resources enables the owner to live without making any contribution to the community? Does not his very ownership constitute a contribution?

Let us see.

An English earl inherits an Irish estate. He has never visited the estate nor taken any interest in it. Each year, however, his steward collects and sends to him £1,000 in rentals. What contribution does the earl make to his Irish tenants? Clearly he makes no contribution. He did not make the land; he takes no interest in it; he never improves it. The land might be owned by anyone or no one; by an idiot child or a steel manufacturing corporation. In any case, the owner would collect the rents.

The English earl has never worked in England.

He wears hats, coats and shoes that are paid for by the labor of his Irish tenants. The English artisans exchange their labor with the labor of the Irish peasants, and the benefits are derived by the man who holds the land.

The holder of the natural resource, because he is a natural resource owner, lives upon the work of those who must use his resources in order to gain a living for themselves.

Exploitation is the term ordinarily used to characterize a condition of society under which one group of people lives upon the labor of another group without itself giving any return for the living it receives. Natural resource monopoly leads inevitably to exploitation. The owners hold in their possession the means whereby others must live. These others cannot choose, but must divide with the owners the product of their toil.

The monopoly of natural resources in the United States has greatly accelerated exploitation. Huge fortunes have been built up on natural resource ownership. Thousands of families, old people and young people alike, are engaged in the pursuit of "living on their income," which means living on the power of ownership.

"Living on one's income" has become a common pastime in the United States. The aristocracy of Europe has been similarly engaged for centuries. Any group of people who can monopolize natural resources can share in the products

of the labor of others, and thus "live on their income."

6. Monopoly Denies Opportunity

Among all of the serious results of natural resource monopoly, perhaps the most serious is the fact that it denies opportunity.

Opportunity is the corner-stone of democracy. Every child born into the world is to have a chance to develop his talents. This freedom of the individual to express himself gives all a chance to show their qualities. Thus the ablest will be called to leadership in science and art, industry and statesmanship.

The early colonists had something of this ideal when they established private property in natural resources. The feudal system of entailed ownership had denied to most men the opportunity to show their qualities. Only the well-born, under that system, were given a chance. All this must be changed. All were born free and with equal rights to a chance in life. The free ownership of a bit of land would insure such a result.

The scheme was tried, and the time came when all of the choice pieces of the earth were taken and held in fee simple "to him and to his heirs forever." The ownership of the best resources was vested in great corporations and the twentieth century found all of the valuable resources in private hands. The child born today sees the doors to opportunity held shut by the very device that was relied upon to block them open.

A few own the resources. The rest, under the driving necessity to live, must go to these owners and ask for a chance to work. The great body of men must accept as masters those who own the means of livelihood.

The anthracite fields are an excellent illustration of the social effects of monopoly. The anthracite fields are not for sale. They are all held, and held tight, by great corporate interests which do not propose to part with them. The owners of the stocks and bonds of these corporations do not even live in the hard coal regions. There are people today drawing income from anthracite stocks and bonds who have never seen an anthracite mine. The anthracite fields are owned by a group of absentee landlords who would not work in the mines, who would not dream of recognizing the miners socially or having any personal dealings with them, and yet who do not hesitate for a moment to live upon the proceeds of the labor of the anthracite mine workers.

The children born to anthracite miners have this opportunity. They may secure a common school education, and then they must go to work in the mines and labor for those who own the resource. Yes, a few of them may save their money, buy stock in the mining companies and live upon the proceeds of the labor of other miners, but is that an answer to the problem? Does it not emphasize instead of solving it?

7. The Political Effects of Monopoly

Beside the economic and social effects of monopoly, there are certain political effects, equally well defined and equally undesirable in their out-croppings. Theoretically the citizens of a democracy are the government. Practically, the monopoly of natural resources vests a section of governmental power in the natural resource monopolists.

The most vital governmental power is the taxing power. The power to tax includes the power to destroy. The taxing authority holds life and death power over his subjects.

What is the taxing power?

Originally it was the right exercised by people in authority, to levy on their subjects. These levies included war duty, labor in the construction of some public work, a percentage of the produce of the land, or, in later times, money. In the earlier stages of civilization a ruler would "farm out" the taxing power over a province. The governor of the province would be required to pay a certain levy. All of the taxes that he collected above this sum were his own. Many of the wealthy men of Rome made their money as governors of tribute territory. The idea underlying this taxation was "get all you can." Consequently, the taxing authority took from the subjects everything except a bare living.

The same concept of taxation existed in Western Europe for centuries. In France, under Louis XIV, the entire nation was drained to

build Versailles, equip it and beautify its surroundings.

Earlier ages knew no such thing as a regular tax rate. The rule "get all you can" meant that the tax gatherer extorted the last farthing. Rousseau tells of a chance visit that he paid to a peasant hut. The man of the house, hospitable as his lot would permit, put on the table a piece of black bread and a bottle of sour wine. They talked for a long time over this meal, and in the course of the conversation the peasant assured himself that Rousseau was neither a tax gatherer nor a tax gatherer's spy. Thereupon he opened a trap-door in the floor and produced some white bread and good wine, with the explanation that, if the tax collector knew that such things existed in the house, his taxes would be increased. The peasant was taxed in proportion to his ability to pay, and taxed all that he had.

This primitive form of taxation came to be regarded as tyranny. Why should the French peasant be reduced to thin onion soup and herbs, through the payment of his surplus to a king and a court that were living in extravagant luxury? The peasant needed the surplus for his very necessities. The king needed it not at all; yet the king (or the prince or duke) got the surplus, because he owned the land.

Many of the early American colonists fled from just such tyranny. They feared taxes because taxes meant want for the tenant and luxury for the proprietor. Hence, in this new land,

following the example already set in the more advanced countries of Europe, taxes were levied only by the representatives of the people, and the proceeds of taxation were used only for the public good. Men still paid taxes, to be sure, but the proceeds of taxation went into roads, schools, public buildings and other public works, from which all of the people could derive benefit.

Taxation was no longer tyranny, but a means of promoting public welfare.

Then free public land disappeared and the monopoly power of those who held the resources grew apace. The power to tax appeared in a new form—the levying of “all that the traffic will bear.”

The wheels of time seemed to move backward. The struggles of centuries were set at naught. A newly created master class was levying on its subjects a tax, not fixed, not destined to minister to the public welfare, but “all that the traffic will bear.”

This taxing power of private monopoly, or special privilege, as it is sometimes called, takes on a new form. The old-time tax collector enforced his decrees against the producer. He took from the peasant who used the land a part of the wheat and the grapes which the land produced. The modern monopolist enforces his decrees against the consumer as well as against the producer.

The worker must use his resources and pay to the owner a part of the product in rent or in surplus value. The monopolist adds to the legit-

imate costs of production an extra charge—a monopoly profit—equal to what the traffic will bear, and insists that the consumers pay a monopoly price for the product.

The owners of the anthracite coal fields are able to levy this monopoly tax on the people of the United States. They own an important resource; the public needs the products of this resource; the monopolists charge for their products the cost of production, a fair profit, plus a tax based on monopoly power.

The owners of agricultural land, in feudal times, levied “all that the traffic will bear” on their tenants. The owners of natural resources in the United States today levy “all that the traffic will bear” on those who consume the products of their resources. Then, as now, this tax went, not to increase public welfare, but to increase private wealth.

Politically, no phase of monopoly is so important as its taxing power. The powers of government are divided between the people (or their representatives) and the owners of the natural resources. Although the facts are not available, there is every indication that the tax paid each year by the American people to the owners of special privilege is greater than the entire amount paid by them for the maintenance of the local, state and national governments.

The second political effect of monopoly or special privilege carries the argument to the fundamental character of the American government.

Democracy is based on the assumption that all men have equal rights. Special privilege is based on the assumption that some men have exclusive rights. The two ideas are diametrically opposed.

When special privilege comes in at the door, democracy flies out at the window. The monopoly of the anthracite coal fields by a few, automatically excludes all others from ownership at the same time that it puts in the hands of the few the power to tax the many.

Special privilege annihilates democracy. The present system of privately owned natural resources is in its very essence a form of special privilege.

Privilege and democracy are opposed, each to the other. If privilege wins, democracy is lost. If democracy wins, privilege is destroyed. The contest between the two was never more bitter than it is today.

The American government was founded on a basis of democracy. The growing monopoly power of resource ownership undermined this democracy, until in the seventies and eighties, with the rise of great aggregations of capital known as "trusts," the very existence of democracy was threatened. The last forty years have witnessed a growing public consciousness of the danger and a myriad of efforts to curb special privilege. Anti-trust and railroad legislation leads the list of the legislative remedies for monopoly control that have been adopted by the American people.

8. *Anthracite and the Government*

The anthracite fields have presented a peculiarly significant phase of the conflict between privilege and democracy, because there the natural resource monopoly and the railroads have, for many years, worked in the very closest harmony, thus combining two of the most powerful forms of privilege.

Suffern, in his analysis of the relations between the anthracite owners and the people, writes: "Large combinations of capital not only assumed all the arrogance of individual ownership, but, because they were conducting large enterprises which could not be carried on without immense capital, they believed themselves entitled to greater consideration than the small owners. The suspicion with which the monopolistic tendencies of large corporations were regarded led their representatives before the legislature to emphasize the favors which large organizations conferred upon the commonwealth and to overawe the simple legislative mind with their mighty projects."¹ . . . "Since the state laws were ineffective, the concerted action of the union was necessary to bring about the abolition of the abuses."²

Continuing, Suffern shows the ways in which the owners of the anthracite coal properties shaped the government to serve their own purposes. The Pennsylvania State Constitution of 1874, "pro-

¹ "Conciliation and Arbitration," *op. cit.*, p. 215.

² *Ibid.*, p. 244.

hibited railroads from engaging in mining and manufacturing." The party in power promptly passed a series of acts which permitted railroads to hold any coal lands acquired previous to 1874 and by an appeal to the Court of Common Pleas permitted the validation of charters rendered defective by the new constitution. As a result of these laws, the railroad interests continued the mining of coal as heretofore.

Judicial interpretation was effective in giving still wider limits to corporate activity in the coal fields.

An investigation by the Interstate Commerce Commission in 1907 showed that "the ownership of coal properties and stock in coal companies by officers of the Pennsylvania Railroad resulted in grave abuses in discrimination and distribution of cars."¹ The legislature passed a law forbidding officers or employees of railroads to have an interest in coal properties along the line of their own railroad. The same legislature created a railroad commission and passed a law forbidding common carriers to "engage in any other business than that of common carriers, or hold or acquire lands, freehold or leasehold directly or indirectly, except such as shall be necessary for carrying on its business."² "Evidently these simple provisions had 'disquieted' somebody, for in 1909 an act was passed 'to quiet the title of real estate and to enable citizens of the United States, and

¹ "Conciliation and Arbitration," *op. cit.*, p. 218.

² *Ibid.*, p. 219.

corporations chartered under the laws of this Commonwealth, and authorized to hold real estate therein, to hold and convey title to real estate, which had been formerly held by corporations not authorized by law to hold real estate in Pennsylvania. . . . Somebody must have required considerable 'quieting,' for this identical act, which had been approved by Governor Stuart, April 23, 1909, was again enacted and approved by Governor Tener, March 7, 1911, and re-enacted and approved by the same governor, June 15, 1911. Evidently it was thought a necessary precaution to pass the act every time transfers of property were made.

"We have given this brief resume of the legal background simply to demonstrate the practically unlimited sway held by capital in the anthracite region and how little consideration of the law was necessary before consummating the deals which took place between 1874 and 1911.

"We have referred to the extent of the ownership of lands in 1872 and 1873. The Reading Railroad made good use of the time, so that when the constitution went into effect in 1874 it was in possession of 100,000 acres. As we have seen, from a legal standpoint there was not much to hinder further purchases, and by 1887 the Reading owned 165,189 acres of coal and agricultural lands which had a bonded indebtedness of \$160,000,000. . . . By 1896 it was estimated that 96.29 per cent of the coal lands was controlled directly or indirectly by the railroads, and 90 per

cent was controlled by five out of the eleven roads reaching the anthracite fields. . . . As we have seen, laws were passed in 1897 and 1903 to legalize transfers that had been made since 1896.”¹

The extensive purchase of coal lands and the extensive mining operations carried on by railroad interests are but examples of the way in which the owners of the anthracite fields showed themselves superior to the law.

The monopoly of natural resources places in the hands of the monopolists such power that they are able to levy a tax on all consumers of their product. So great is this special privilege, given to the few and withheld from the many, that in past years the natural resource owners have been able to direct some of the affairs of government.

9. The Enemy Within the Gates

However attractive the plan for the private ownership of natural resources may have looked to the early settlers of America; whatever escape it may have offered from the grim tyranny of European landlordism, the project apparently has failed. It was designed to promote ambition, initiative and thrift; to create opportunity and to increase the possibilities for life, liberty and the pursuit of happiness. In practice, it has led to a new form of monopoly—the monopoly of industrial opportunity.

The private ownership of natural resources has

¹ “Conciliation and Arbitration,” *op. cit.*, pp. 119–21.

gone farther. By giving to individuals the exclusive right over the choice bits of the earth's surface, it has placed in the hands of these individuals an immense power—economic, social and political. Economically, it gives the monopolist the power over the opportunities for the employment of his fellows, enables him to fix prices, gives him an income for which he need do no work and permits him to take possession of social values. Socially, natural resource monopoly leads to inequality, makes for classes and for class distinctions, makes possible exploitation and makes impossible equality of opportunity. Politically, natural resource monopoly gives the monopolist the power to tax the community and enables him to set up an authority which frequently dominates and supplants the authority of political government. The private ownership of natural resources has centered in the hands of the resource owners an immense authority over the destinies of mankind.

The early arguments in favor of natural resource ownership by individuals were based on the assumption that the individuals who owned would be energized and stimulated. The private ownership would therefore open a larger field of opportunity for mankind.

The chief resources are today owned by corporations which have neither energy, thrift, ambition nor any other human virtues. Instead, they are legal entities, with perpetual life, limited liability and an immense range of authority. The owner-

ship of most of the important resources has passed from the individual to the corporation, and with that transfer there has gone practically every one of the original arguments in favor of the private ownership of resources. The founders of American democracy presupposed an individual ownership. The revolution in the form of industrial control has made the ownership largely corporate.

Although the chief reasons in favor of the private ownership of natural resources have been swept out of existence by the inauguration of corporate ownership, private ownership remains—a special privilege under the control of the few, and carrying with it a monopoly power of the most sweeping character. Exercising its authority as a means of augmenting profits, strangely blind to the public weal, this monopoly of the means of life threatens to wreck this civilization as it has wrecked its predecessors.

Natural resource monopoly entered our civilization as a friend and benefactor. Time and experience have shown that a wolf was hiding under the sheep's clothing.

The lesson of natural resource monopoly—as it appears in history, as it exists in the anthracite fields, as it may be found in other American resources—is unmistakable. The benefits go to the privileged few, while the great majority of men pay the bill.

CHAPTER 8

THE FUTURE OF ANTHRACITE

1. The Conflicting Anthracite Interests

THE figures that have been cited show conclusively enough that there is, in the anthracite field, a line-up of conflicting interests. On the one side are the operators; on the other side are the workers and the consumers. The operators aim at large profits; the workers demand high wages; the consumers seek low prices. High wages and low prices threaten profits, hence the advocates of high wages and low prices are necessarily brought into conflict with those who aim at large profits.

There is nothing uncommon about such a situation. Everywhere one meets with conflicting interests; everywhere there are gainers and losers. Opposed to each group in the community is some other group. The organization of society arises out of this diversity of interests. The important point is not that some gain and others lose, but who gains and who loses.

The answer which American philosophy makes to such a conflict is unmistakably definite. The net gain must be the gain made by the majority. The principles laid down as the foundation of American political and social life allow of no other alternative.

The American governmental idea was born at the end of a political and social system that had as its object the gain of the favored few. A special class (the aristocracy of Europe), selected automatically by the accident of birth, through their control of the natural resources and of the offices of trust, enjoyed the first fruits of the land. Meanwhile the great mass of mankind worked on the land owned by the few, did their bidding in peace and in war, and received for these services the barest subsistence. The government was managed in the interests of a small number of hereditarily privileged persons. They enjoyed its benefits while the remainder of the human race carried its burdens.

America was the embodiment of a protest against a social system maintained in the interests of a special class. The American government was to be a government by the people, in their own behalf.

The laws of life dictate that in every conflict some must lose and some gain. Feudalism boasted a few gainers and a great many losers. The early colonists, as well as the founders of the State and Federal governments, sought a social system under which there should be many gainers and only a few losers.

Was this too much to hope? Was it unreasonable to expect that a system of society could be devised under which the majority and not the minority were to be the net gainers in life? If such a proposition is hopeless, the whole basic

assumption of democracy is false. So long as that belief in the importance of majority welfare persists—so long as the democratic ideal holds sway—any question of public welfare must be decided with the welfare of the majority directly in view.

The problem of natural resource control is one of those large social questions that must be tested in terms of majority welfare. Those who control the resources of the country hold under their sway the nation's "tree of life." Let one part of the people secure full control of these resources and their "yea" or "nay" is the last word that can be said.

The problem of natural resources differs not a whit from any other question of social welfare save that it is more vital than most questions. The same rule of social procedure that held good in 1789 holds good in 1916. Those things that can be privately managed, with a maximum of advantage to the community, must be left under private control. Those things, on the other hand, that under private control might become a menace to community welfare must be publicly managed in the interests of all. The Constitutional Convention proceeded on this assumption, leaving all mercantile and manufacturing business to private initiative, while the control over waterways, post roads, the issue of money, and other like activities that experience had shown to be necessary to public welfare, was vested in the government.

During the past century and a half the American people have had a very definite experience

with the private ownership of natural resources. This experience is typified by the situation in the anthracite fields. What action shall they take in this and other cases of like import?

2. The Coal Owners Would Stand Pat

One group of interests in the anthracite fields is entirely willing to let things remain as they are. The coal owners are satisfied. They can well afford to be contented with the situation, since the net benefits from the present system of land control accrue almost wholly to them.

As things stand at present, the owners of the anthracite properties have the following assets:

1. A valuable natural resource which is readily convertible into a highly marketable product.
2. A large and an assured income that is based on the continued use of this resource.
3. A property that, up to a certain point, will increase in value as years go by, and that, owing to the accepted methods of bookkeeping, will leave, after its exhaustion, a depreciation or amortization fund sufficient to return to the owners an amount equal to the high-tide value of the property.
4. So long as the present system of land ownership continues, a source of

increasing monopoly power, based on a steadily growing demand and a decreasing supply of anthracite.

If there can be any assurance in investment, this anthracite investment is sure. The owners know this. They, better than anyone else, appreciate the supreme importance, to them, of their present position. Therefore they stand for the continuance of a system that produces huge profits for the owners and subsistence wages for a great body of the workers, while it lays the full burden upon the consumer in the form of increased prices.

3. The Future for the Workers

The owners are satisfied, but they are, numerically, only one small factor in the problem. There are 175,000 anthracite workers. What is their position?

The workers are not satisfied with things as they are. On the contrary, they have, during recent years, expressed themselves continually and forcefully in long-continued, bitter labor wars. The workers want a change in the conditions prevailing in the anthracite fields, and they want it so badly that they have shown their willingness, during one suspension after another, to suffer privation and to see their families suffer privation in order to bring about the changes in which they believe.

The anthracite workers may demand any one of five important changes in the coal fields:

1. They may demand a minimum wage based on the cost of decent, healthful living.
2. They may demand, over and above this "living wage," a return for the extra hazards of the work which they are called upon to do.
3. They may insist that these wages shall increase in proportion to the increasing cost of living.
4. They may demand a share in the phenomenal prosperity of the anthracite business.
5. They may demand the "full product" of their labor.

The first three demands may be realized through the operations of a powerful trade union. The miners have a number of excellent examples before them. The railway brotherhoods, after years of unceasing activity, have at last reached a point where they command public confidence and exercise an authority so strong that they have secured a wage that represents decency, risk and, in the last year or two, the increase in the cost of living. Indeed, these unions have grown so powerful that in the last request for an increase of wages on the western lines, the men were willing to argue that they were entitled to some share in the prosperity of the railroads. The building trades, the printers

and a few other trade groups have been able to secure decency wages through their trades union. The union is therefore an agency that the mine workers may rely upon to give them wage increases up to a certain point.

The unions have generally failed to get a share in the prosperity of the industries for which they worked, unless full time work can be regarded as a share in prosperity. This failure has been due mainly to the facility with which the employers have been able to shift the burden of increased wages to the consumer.

The manner in which the increase in wages to the anthracite workers has been used as an excuse for adding even greater burdens to the load carried by the anthracite consumer, is found, in duplicate, wherever the employers have a sufficiently great monopoly power. The result is that the apparent gains of a few workers have been more than neutralized by the general increase in the prices paid by all workers.

Unions have bettered working conditions, raised wages, decreased hours and given to the workers a feeling of solidarity. From the very nature of the case, they cannot be an important factor in securing a fairer distribution of income, so long as the employers possess a monopoly power sufficient to enable them to use a wage increase as an excuse for adding that and more to the price of the product.

The demand for the "full product" of labor, voiced so persistently of late years, presupposes

a complete overturn of the present economic organization of society. So long as the owner of a piece of anthracite land, simply because he is the owner, is permitted to take a share of the product of the mines, there can never be a "full product" to the worker. So long as the owner of the mine machinery, simply because he is the owner, is able to take a share of the product of the mines, there can never be any "full product" to the workers. The term "full product" of labor presupposes an economic system under which income from industry goes only to those who render some active service to the community. Such a situation cannot be realized until there is a very complete social ownership of all of the natural resources and of the social tools of production. This would mean, in the anthracite fields, that the community would own and operate the anthracite mines, that it would plan to pay wages equal to what each man produced, and that all forms of social value, due to the value of the coal in the ground, to the value of rights of way and the like, would go into the common treasury, to be used for the building of roads and high schools for the payment of accident and old age insurance, for the extension of public work, and for the doing of other things that are necessary to public welfare.

Any such program obviously requires the complete readjustment of some of the most fundamental economic relations. At the same time, many of the workers are convinced that nothing except a fundamental readjustment will success-

fully bridge over the chasm of economic maladjustments that appear to lie on all sides of the present order.

The facts stated in the chapter on the wages of the anthracite workers made it clear that there were reasons why the workers might well be dissatisfied with the present economic order in the anthracite regions. The least the miners can hope for is a powerful, aggressive union that shall raise their wages to a level of living decency and make them reflect the risks of the trade and the increasing cost of living. The most that the miners can hope for is a complete readjustment of the economic situation in the anthracite fields that will make the whole people the owners of the field and the employers of the miners, and that will give to the miners, as workers, consumers and members of society, the full product of their labor

4. The Consumers and the Future

The consumers are the great majority of people at interest in the anthracite problem. Under the present system of administration of the coal mines they pay the full cost of every change in the expense of production, in the wages of the workers or in any other matter affecting the economic aspect of the anthracite situation. It is as if the operators should say to the general public, "We will be glad to make any improvements that you suggest, to alter our wage scale, increase the safety of our mines, reduce the amount of child labor, modify the form of our combination and take such other steps as you may advise,

but you will readily understand that we cannot hope to do these things without incurring additional expense. Since our profits are only barely sufficient now, we see nothing for it but to add the cost of these admittedly necessary improvements to the price which you pay for your coal."

The consumer is thus brought face to face with the monopoly problem which was discussed in the first chapter. The operators have proved themselves sufficiently powerful to add to the price of the coal the increases that have come from changes and improvements, and in addition a tidy sum in return for their monopoly advantage. The coal owners charge "all that the traffic will bear." What shall the consumers do to secure just or "cost" prices?

It is obvious that the consumers are powerless as individuals. Their one hope lies in concerted action. The monopolists of any needed resource, under the present system of property ownership, are able to force their will as against any one person, or as against any group of persons, unless they are powerfully equipped to contend in the economic arena.

The machinery of government is the logical channel through which the consumers may express themselves. They are the body of the people, and the government of a democracy is a government of the people. The consumers are organized in the most powerful organization in the community—the government. They would naturally employ this organization in their efforts to secure

justice in their dealings with the anthracite interests.

There are really only two ways in which the consumer may express himself through his government. First, there is taxation; second, there is state ownership. Some people still insist on the possibilities of government regulation, but a quarter century of endeavor, during which State and Federal governments have vied with one another in their efforts to "regulate" and during which together with many other natural resource monopolists, the anthracite coal owners have succeeded in perfecting a monopoly organization that gives them virtual control of the price of their product, has convinced many of the most ardent advocates of regulation that the government cannot succeed, in the face of highly organized private monopoly, in working out a successful scheme of regulation.

The reason for the failure of regulation lies in the fact, already noted in the discussion of the political effects of monopoly, that the industries that are subject to regulation often prove to be so much stronger than the government that they can make and modify laws and direct public affairs in their own interest. Their control of the resources gives them a source from which to draw the huge surplus funds that are needed to run an organization in successful opposition to the established government. The best proof of the power of these great industrial combinations is their existence after a quarter century of endeavor to overthrow them.

The subject may be attacked from a different angle. The community may exercise its power through taxation. The value of the coal in the ground, and the values that are added to the coal as population increases and demand grows, are social values. That is, they are created by the entire community and are not in any sense the result of the activity of any single individual.

A tax might be imposed by the community on the anthracite industry that would absorb the full value of the land—the full social value—irrespective of the improvements that have been made upon it.

The taxation method is simple. It is direct. It makes use of governmental machinery already in existence. It introduces no new principle and therefore is not subject to the objection of unworkableness. All of the arguments in favor of the possibilities of the plan are adequate, barring this one objection. It is proposed to put into operation a system that will prove more drastic than any form of regulation ever pretended to be, against the opposition of the same group of interests that have been successful in thwarting previous attempts at effective regulation. These interests have refused in the past to permit regulation. What reason is there for supposing that they will now accept the operation of a system of taxation that will do practically what the regulative measures passed heretofore have failed to accomplish?

Wherever the mine laws, health laws, child labor

laws and new tax laws have added to the cost of producing coal, the operators have calmly put these additional costs in the column under "Fixed Charges" and asked the consumer to foot the bill. What reason has the consumer to suppose that the same thing will not happen in the case of the tax on social values?

The logic of the situation seems to force the conclusion that as long as the owners of the anthracite fields retain their present monopoly power, the consumers are helpless before them. There is, then, only one thing for the consumers to do, and that is to eliminate the monopoly power of the anthracite interests, which lies in their ownership of a natural resource.

The consumers have their government founded on the idea of political democracy. Side by side with this political democracy, dominating its activities in some directions, threatening its very existence in others, is the monopoly organization of coal interests. This organization is in many respects stronger than the government itself. Through its monopoly power it exercises such governmental functions as that of taxation. The organization secures laws and interprets them. It is a form of government existing at the same time and place as the political government which the citizens of the United States for a long time believed to be the only government in the land.

A house divided against itself cannot stand. Two equally powerful governments cannot exist

at the same time in the same jurisdiction. One or the other is bound to assume a position of dominance.

The consumers of the United States must choose between the two governments in the anthracite industry. If they favor monopoly profits, they should decide in favor of the anthracite interests. If, on the other hand, they believe that the democratic principles that underly the American system of political government are still valid, and still applicable to the affairs of the people, then the people themselves must undertake the management of this and of every other enterprise whose existence threatens the continuance of a government by the people.

The workers in the anthracite regions are in a position where they can endure the present economic system if they are able to maintain a sufficiently powerful union. To the consumer, the continuance of the present economic system in the anthracite fields means not only the financial burden of monopoly profits, but a far more onerous burden in the form of an attack on the very foundations of the established political government, which the consumers regard, and rightly so, as their one source of protection and power.

The interests of the consumer clearly demand that the community, acting through the state or the national government, shall take possession of the anthracite coal fields, operate them in the interests of the community and sell the people coal at cost. Many recent precedents for this action

exist. The government has developed irrigation projects and sold them to the people at cost; in its largest single venture it is developing transportation in the Panama Canal and selling it to the people at cost. The time seems to have come when the public interest demands that the government shall take over the anthracite coal fields and sell anthracite to the American people at cost.

5. Winners and Losers

A continuance of the present system of ownership in the anthracite fields will benefit the operators alone. They are the ones primarily interested in the maintenance of things as they are. The workers and the consumers, making up the vast majority of those who are interested in the anthracite problem, will benefit only through some change in the present system. The change which seems most likely to benefit both workers and consumers is an economic reorganization that will make the community the owner and director of the anthracite field and of its administration.

END

APPENDIX

SHIPMENTS OF ANTHRACITE BY SIZES, LONG TONS, 1890 TO 1913

	<i>Sizes Above Pea</i>		<i>Sizes—Pea and Smaller</i>		<i>Total</i>
	<i>Quantity</i>	<i>Per Cent</i>	<i>Quantity</i>	<i>Per Cent</i>	<i>Shipment</i>
1890	28,154,678	76.9	8,460,781	23.1	36,615,459
1891	30,604,566	75.7	9,843,770	24.3	40,448,336
1892	31,868,278	76.0	10,025,042	24.0	41,893,320
1893	32,294,233	74.9	10,795,304	25.1	43,089,537
1894	30,482,203	73.7	10,908,997	26.3	41,391,200
1895	32,469,367	69.9	14,042,110	30.1	46,511,477
1896	30,354,797	70.3	12,822,688	29.7	43,177,485
1897	28,510,370	68.5	13,127,494	31.5	41,637,864
1898	28,198,532	67.3	13,701,219	32.7	41,899,751
1899	31,506,700	66.1	16,158,504	33.9	47,665,204
1900	29,162,459	64.7	15,945,025	35.3	45,107,484
1901	34,412,974	64.2	19,155,627	35.8	53,568,601
1902	19,025,632	61.0	12,175,258	39.0	31,200,890
1903	37,738,510	63.6	21,624,321	36.4	59,362,831
1904	35,636,661	62.0	21,855,861	38.0	57,492,522
1905	37,425,217	60.9	23,984,984	39.1	61,410,201
1906	32,894,124	59.1	22,804,471	40.9	55,698,595
1907	39,332,855	58.6	27,776,538	41.4	67,109,393
1908	38,319,325	59.3	26,345,689	40.7	64,665,014
1909	36,437,762	58.1*	26,250,597	41.9*	62,688,359
1910	38,415,323	58.5*	27,297,438	41.5*	65,712,761
1911	41,728,071	59.2*	28,696,126	40.8*	70,424,197
1912	39,538,583	60.6*	25,662,670	39.4*	65,201,253
1913*	43,934,919	61.6*	27,360,797	38.4*	71,295,716

—Mineral Resources of the United States, 1913, Part II, p. 889.

* Exclusive of coal recovered by river dredges.

EMPLOYEES, WORKING TIME AND TONNAGE
1890 TO 1913

	<i>Men Employed</i>	<i>Days Worked</i>	<i>Average Tonnage Per Man Per Day</i>	<i>Average Tonnage Per Man Per Year</i>
1890	126,000	200	1.85	369
1891	126,350	203	1.98	401
1892	129,050	198	2.06	407
1893	132,944	197	2.06	406
1894	131,603	190	2.08	395
1895	142,917	196	2.07	406
1896	148,991	174	2.10	365
1897	149,884	150	2.34	351
1898	145,504	152	2.41	367
1899	139,608	173	2.50	433
1900	144,206	166	2.40	398
1901	145,309	196	2.37	464
1902	148,141	116	2.40	279
1903	150,483	206	2.41	496
1904	155,861	200	2.35	469
1905	165,406	215	2.18	470
1906	162,355	195	2.25	439
1907	167,234	220	2.33	512
1908	174,174	200	2.39	478
1909	[205]
1910	169,497	229	2.17	498
1911	172,585	246	2.13	524
1912	174,030	231	2.10	485
1913	175,745	257	2.02	520

—Mineral Resources of the United States, 1913, Part II, p. 753.

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